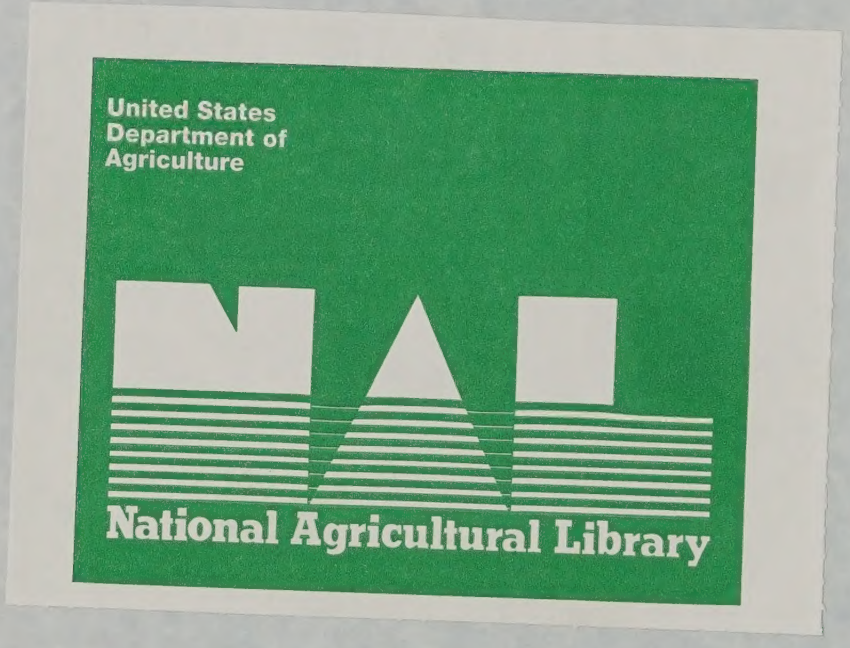
RCA III

Influence of Social Trends
on Agricultural Natural Resources

POLITICS
AND THE ENVIRONMENT

Working Paper No. 19F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This is part of a set of papers originally presented at the Symposium on
INFLUENCE OF SOCIAL TRENDS ON AGRICULTURAL NATURAL RESOURCES
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Resource analysis and assessments are ongoing functions of the Natural Resources Conservation Service. These assessments play an important role in how we keep the public and policymakers informed about emerging conservation and environmental issues, develop plans to conserve our natural resources, and design programs to provide national leadership for the conservation of natural resources on America's private lands. For additional information about this or other NRCS resource assessment publications, contact the Director of the Resource Assessment and Strategic Planning Division, USDA, Natural Resources Conservation Service, P. O. Box 2890, Washington, D.C. 20013.

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Overview of the Symposium

The symposium on *Influence of Social Trends on Agricultural Natural Resources* took place on May 31–June 2, 1995. The speakers presented current trends and were challenged to forecast trends in conservation of our natural resources at two separate points in time—10 and 50 years in the future. This type of forecasting was an unusual challenge to the participants. Many of the "empirically oriented" social scientists chose to remain close to their data, while others did as they were asked and tried to act as seers. Only time will tell how close they came to predicting future scenarios. Assembling any group of scholars will lead to mixed forecasts. Rather than repeat each author's message, we have tried to emphasize some common themes in the presentations. If you want to find out what the authors themselves think, read the papers. It is well worth the effort.

Although the attitudes of the public and the agricultural community differ on some issues, support for a clean agricultural environment is almost universal. The public is concerned for the safety of food and water supplies. The public also feels that laws on threatened and endangered species and wetlands are just right or have not gone far enough in providing protection. Most farmers and ranchers, along with the public, support a federal role in agricultural conservation, especially in incentive payments to promote conservation.

Most of the public would like to see federal spending on agricultural conservation increase or remain the same. The desire of the public and agricultural communities to have an incentive-based system has been partly realized with the passage of the 1985, 1990, and 1996 Farm Bills (respectively Food Security Act of 1985; Food, Agriculture, Conservation, and Trade Act of 1990; and Federal Agriculture Improvement and Reform Act of 1996). Concurrently, the public supports regulation, fines, and withholding government benefits when voluntary conservation is not working. A majority view among presenters was that with time there would be an expanded regulatory role for all levels of government vis-à-vis production agriculture. There was some disagreement on whether this expanded regulatory role would come through the use of centralized, command-and-control regulations or through the use of market-based incentives.

When given an opportunity to voice their opinions regarding conservation compliance, most farmers with highly erodible land supported the program and did not want Congress to abolish it when crafting the 1996 Farm Bill. Furthermore, farmers with highly erodible land and conservation compliance plans believed that NRCS was more than fair in its implementation of conservation compliance planning. Over the last 5 years (the period during which farmers had to acquire their plans and have them fully implemented), farmers have been consistent in their support of the program. However, there is a troubling drop in the percentage of farmers with conservation compliance plans who believe that monitoring and enforcement are being carried out in such a way that farmers who are out of compliance will be found out and will lose eligibility for USDA program benefits.

The environment and ecosystem management will remain important future issues for the public and agricultural producers. During the next 50 years, as the global population continues to grow, agricultural producers and agribusinesses will be challenged to expand food production and the processing and distribution systems to keep pace with population growth without endangering the ecosystems supporting production agriculture. In industrialized countries, alternative food sources will be developed, environmental monitoring will become more widespread and more precise, and new environmentally benign methods of production agriculture and food processing will be developed. Given capital limitations, resource constraints, and increasing demand for food, the poorer countries will face growing environmental challenges as they use their physical resources more intensively in the effort to feed their populations and expand their trade abroad. Sources of environmental stress will be in the energy, manufacturing, and extractive industries in addition to agriculture. The future of humanity will depend on the development and sharing of appropriate technologies and mobilizing global efforts to effectively control population, produce enough food and fiber, and protect the environment.

A number of papers underscored the structural transformation underway in the agricultural and financial sectors. Increased vertical integration and the separation of land and resource ownership for farm operations are rapidly changing the character of agriculture. For example, one author suggested that in the 1980s banking and finance became more national, if not global, as local banks and credit unions—especially in rural areas—went out of business. The cold dollars-and-cents business world of finance merges uncomfortably with the inherent instability of agriculture and the accompanying fluctuations of farm income. During the next 10 years, income in the agricultural sector may be even more volatile, due to the elimination of the farm income safety net. With the gradual removal of this safety net through the 1996 Farm Bill, farmers will face increased financial risk and greater uncertainty. A challenge for operators will be the development of strategies for shifting the increased risk from themselves to others.

One consequence of the consolidation within the financial sector will be the shifting of funds away from rural areas and the increased reliance of farmers on capital and operating loans coming more from commodity processors and input suppliers than from traditional banking sources. Corporations will begin to own more agricultural land, and for the land they do not own, they will contract with farmers as to what to produce and how to produce it in exchange for a guaranteed market for the commodity. In many instances, the farmers will be no more than salaried workers. One impact of these changes will be to make farmers dependent on agribusinesses. Farmers and farm managers will have a vested interest in production, not conservation. In this transformed world of agriculture, a major challenge will be the public sector's voice demanding food safety, environmental quality, and worker health and safety.

Much of the livestock industry—cattle, chickens, hogs, turkeys, and sheep—is currently controlled by a few companies. In addition to livestock conglomerates, industrial consolida-

tions of port facilities and feed, elevator, milling, and soybean-crushing plants limit market access for individual producers. Companies that contract for agricultural products are not typically held responsible for environmental impacts, while individual producers are. Hence, while agricultural processors will increasingly specify what to produce and how to produce it, the environmental consequences of those specifications will shift to individual producers. However, the public will exert enough pressure so that environmental responsibilities will likely be pinpointed as this type of agricultural concentration increases. Not only will concentration of production and processing take place in the livestock sector, it will also occur with grain and oilseed crops, their processing, and the transportation of all agricultural commodities. Farmers, public interest groups, and government officials are just now becoming aware of the structural changes sweeping over agriculture and of the implications they hold for producers, consumers, and the environment.

Crop biotechnology is not currently and will not in the next 10 years be a significant factor in relation to environmental quality. However, some aspects of agricultural industry are more directly affected by biotechnology than others. For example, the livestock industry has been affected through the development of growth hormones and vaccines for increasing livestock production. In contrast, it is more difficult to manipulate cereal grains through bioengineering technology than was thought at first. In fact, these common grains may be easier to modify through conventional breeding techniques that improve multiple genetic (polygenic) traits than by the use of biotechnology, which focuses more easily on single genetic traits.

Crop biotechnology (e.g., herbicide- and pesticide-resistant crop varieties) is following an established technological trajectory rather than defining a new path. Some of these developments feed into existing monocultural practices (with their attendant environmental problems) and limit the use of crop rotations. Mechanization and industrialization are the current dominant trends in agriculture, and biotechnology complements these trends. Biotechnology will have mixed effects on environmental quality, and its impact depends to a great degree on how public policy is implemented in the environmental arena.

Several researchers projected that national conservation institutions over the next decade will remain in place but with reduced funding. State and local institutions will need to significantly increase resources directed toward conservation. Stronger agricultural regulations will be passed at the state and local levels. However, in general, states and local areas do not have the financial capabilities to provide full-service technical assistance and cost-sharing for conservation, nor do they have the staff capabilities to regulate the agricultural industry. In fact, one of the challenges is not only the extent to which states can pass legislation on soil and water conservation but the extent to which they can implement and administer the laws they have. Presenters recommend that state and local political institutions acquire taxing authorities so they can more directly provide staff assistance and incentives to foster natural resource protection and enhancement at the local level. While state and local units of government could assume greater responsibility for soil and water conservation programs,

an important challenge will be how much *both* the agricultural and nonagricultural communities are involved in decisionmaking, as well as how closely local concerns reflect the environmental concerns of the wider community.

The projected unit of analysis for agricultural conservation work is at the watershed level. While this unit may be very appropriate for ecosystem planning (e.g., ecological linkages across a landscape, a context for socioeconomic-political institutions), it presents a number of challenges that have to be addressed if the watershed approach is going to achieve its promise. For example, what is the spatial scale at which a watershed is defined? Is a large-scale or small-scale approach taken to delineate watersheds for planning purposes? Another question is, what criteria are used to separate watersheds: are they biological, social, or topographic in nature? How can watershed planning be reconciled with various overlapping levels of government that have to be coordinated and through which administrative control of conservation policy is exercised? And finally, how can procedural and substantive issues of the wide variety of organizational missions be addressed at a watershed level?

The idea came up repeatedly that while most farmers and ranchers use sound conserva-tion systems, 10 to 15 percent of them are "bad actors." These producers are unaware of or choose to ignore the negative effects of their production systems on the environment. It will be extremely difficult to change the behavior of these people. Participants felt that the larger society will eventually demand that the bad actors be penalized for polluting the environment. The penalties might come as fines, stricter environmental regulation and enforcement, or more programs like conservation compliance. Two forces are at work. First, the structural changes taking place in agriculture are working to destroy the Jeffersonian image of the yeoman farmer that gives farming special status vis-à-vis environmental regulation. Second, more and clearer information about the interaction of production agriculture and environmental quality will result in stronger public demand for environmental protection. Improved resource inventories will facilitate the tracking of environmental degradation and the levying of penalties. Resource inventories will become more important in the future, based on two trends: *increased accountability* for scarce financial resources, and *advancing scientific capabilities* that increase the ability of conservation partners to assess and monitor environmental conditions.

Environmental justice was another topic discussed. Industry and agriculture have taken advantage of minorities by ignoring the effect of agricultural pollutants on minority populations and by placing chemical production, waste facilities, or concentrated farm operations in minority communities. A Presidential Executive Order on Environmental Justice (Executive Order 12898) attempts to address this issue. During the next 10 years, increased awareness of these issues in minority communities will merge with more reliable and accessi-ble information to slow but not stop these negative impacts. The "not in my backyard" movement, a classic middle-class movement, helps to relocate agricultural pollution to minority areas. It will take many years before this entrenched trend is offset.

The future moves erratically, with many choices that each yield unclear results. History has the advantage of being able to look back to add meaning to society's many bends in the road. The exercise of looking ahead 10 and 50 years forces researchers to rely on their basic assumptions about the nature of human beings as well as the influence that systems wield on future events. Skepticism and optimism were the yin and the yang of this symposium. Comparing the present to a future ideal is frustrating because, in some cases, the present environment is toxic to living creatures. However, at the same time, there is room for optimism. The continuing environmental movement in general has been strengthened and sculpted by the legislative and executive branches of different levels of government. This can be attributed to the public's strong support for wetlands, wise use of agrichemicals, food safety, water quality, threatened and endangered species, and safe recreational opportunities. The public also supports localized decisionmaking, which puts human and physical resources in local hands.

As we look 50 years into the future, the trend toward the industrialization of the agricultural sector is bound to accelerate. It seems conservationists are presently pushing their bandwagon down a slight grade because of the public's support. To speed up the wagon, we must institutionalize two new inputs besides the traditional inputs of land, labor, technology, and capital. These added inputs are *environmental considerations* and *fairness/equity*. As these inputs become standard costs for doing business, the agricultural sector will realize its potential to be healthy, fair, and productive.

Frank Clearfield and Steven Kraft

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National Politics and Farm Policy

Musings from Washington

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Introduction

The political future is difficult to predict. Political changes usually follow broad trends and discernible patterns. But they are periodically disrupted by sharp reversals that are sometimes unanticipated, even a short time before they occur. These characteristics make the future evolution of public policy difficult to predict. An example from an editorial by Robert Elving published in the Congressional Quarterly on June 29, 1991, a little more than a year before the 1992 national elections, captures this difficulty when comparing the upcoming election to several earlier national elections.

> One thing we all know for sure these days is that George Bush will be reelected in 1992. The Gulf War has cast Bush as a man of resolve in world affairs. The economy appears to be picking up. The social issues with which Bush skewered Michael S. Dukakis in 1988 still cut his way. And the GOP keeps tightening its grip on a block of States that bulk ever larger in the Electoral College.
>
> However you feel about the prospect, it is daunting to devise a scenario by which Bush could be denied. History tells us that the true course of presidential elections has rarely been discernible from this far off. . . . [F]rom the remove of a year and a half, the urge to predict seems as irresistible as it is insupportable. Relying on polls and on soundings among the cognoscenti, people who ought to know better go out on the flimsiest of limbs.
>
> Does this call for a full-ranch bet against the GOP in 1992? Hardly. Being incumbent and popular remains preferable to anything else. But you still have to pave the road before you cut the ribbon. Don't let anyone tell you different.

We have been asked to look 10 and 50 years into the future. That is the equivalent of looking at 1955 and today from 1945. In 1945, most of the major influences of concern for this discussion, such as the emergence and evolution of environmental concerns or even the civil rights movement would have been impossible to predict, and anyone making such predictions would not have been credible. People probably found it difficult to think of what the world would be like after the Axis powers were defeated, and how national politics

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The views expressed in this paper are those of the author alone and do not reflect any views or opinions of the Congressional Resarch Service.

would change after Roosevelt was gone. In politics, I am not aware that anyone foresaw the collapse of party discipline and leadership, or the effects of political scandals that were over the horizon. Even in a more condensed time frame, say 5 years, the future of politics is difficult to predict. Returning to 1945, it is unlikely that anyone was predicting that the Republicans would capture the House in 3 years after being out of power for almost two decades, or that the Democrats would regain control for almost a half century thereafter.

Placing this discussion in a contemporary context, what would someone have said in January, 1994, about the anticipated 1995 farm bill debate as the 1994 election and the 104th Congress approached? In January, 1994, no major political pundit was predicting that the Republicans would take control of both chambers (most were suggesting that taking over one, the Senate, was a remote possibility). The farm bill and Clean Water Act reauthorization were viewed widely as opportunities to build on earlier enactments and expand on environmental accomplishments and objectives. All the major interest groups based their preparations for the 1995 farm bill debate on an election that would leave the Democrats in control of the House and the Senate.

This view seemed reasonable because while most political change is evolutionary, the characteristics and timing of less frequent but disruptive revolutionary changes, such as the congressional election of 1994, are hard to anticipate. The revolution is greater precisely because interests are unable or unwilling to work toward a position in anticipation of an unlikely, but possible, outcome. In 1994, for example, few expert political analysts, who were paid a great deal to forecast the political future, thought the Democrats would lose the House, even 30 days before the election. No major agricultural interest appears to have positioned itself prior to the election to either take advantage of or minimize the damage caused by the change. This lack of anticipation makes the impact of such changes on the legislative process especially hard to predict, as all affected parties scramble for advantage while the new setting is being defined. In the current case, even with the "Contract with America" as a clear set of guides, there have already been significant surprises in the legislative arena since the election.

So what of the future? When I ask audiences, putting aside personal biases, to indicate whether they think that the Republican party can hold the House in 1996 (something that it has not accomplished since the 1920s), there are usually a similar number of hands for both outcomes, and also, typically, a number will not vote. The answer to this question is critical because which party controls the House, as well as the Senate and the White House, will determine the broad dimensions within which public policy will be decided. It will also determine which interests have the greatest accessibility to the policy process, and therefore the strongest voices in articulating the outcome.

In discussing the future, this paper offers musings around three general topics; political volatility, the changing face of farm politics, and emerging topics for agriculture. Few of these musings should be surprising, which leaves me wondering about their accuracy, given the 1945 analogy. They are but a sampling of the many different observations that could be

offered. A few include a time dimension, that is, how far into the future they might occur, but most do not. History shows us that the pace of change is almost as hard to anticipate as the character of change. The paper concludes with a few summary comments about the future of agricultural policies in the evolving political context.

The national political arena will be more volatile for a number of years

National politics, at least in the near term, is likely to be characterized by wilder and wider election swings between liberal and conservative winners. These swings will be larger because both major parties will be appeasing their more extreme constituencies, which will remain the heart of party activism, while trying to capture enough of the middle ground to win elections. While the dependence on the more extreme bases of parties will cause larger swings in election results, public sentiment for some variables, such as protecting the environment, are likely to remain remarkably steady, as opinion surveys have repeatedly shown during the first half of this decade. But other issues, especially social issues, are likely to be less stable. This political volatility has several implications. One of the most profound is that there will be more support (and room) for the emergence of a centrist third party at the national level. And odds favor some success for such a party, should it find a message and a leader who resonates with the public.

A second implication is the broad inconsistencies between ideology and practical actions will be more visible and seem to appear with greater frequency. These inconsistencies can be seen in congressional considerations when broad ideology is often incompatible with—and repeatedly loses out to—"pothole" politics. These results often appear in the recesses of appropriations legislation. In agriculture, the philosophical debate over limiting the role of government in influencing an individual's decisions is in marked contrast with the specific and vigorous defense of federal farm program benefits for constituents.

These swings will be driven by lack of trust of government from a growing segment of the public that believes itself to be disenfranchised for various reasons. Members of the electorate, but especially those who believe that they are disenfranchised, seem to know a lot more about what they do not want than about what they do want. When that is combined with the electorate's increasing intolerance and impatience with the pace and characteristics of political change, the result is a greater willingness to "throw the bums out" rather than give them another chance. This contrasts with recent decades when, with few exceptions such as the Reagan revolution of 1980, almost all incumbents were reelected and representation in relatively few districts and States with open seats changed parties. Also, more individuals seem to be separating their personal wants and needs from national, or social, wants and needs—and many believe that they are either more entitled or have received less than other segments of society. This battle, which is often articulated as conflicts over "rights," shows no sign of abating.

These swings will mean that the more rapid turnover rate in Congress of the past three elections is likely to continue. Already, the effects have been significant. An oft-stated

statistic is that only 10 of the 49 current members of the House Agriculture Committee were on it during the 1990 farm bill debate. This change, combined with the 1994 change in the majority party, means that very little institutional memory is available to guide the committee in its current farm bill deliberations and it results in less efficient operations as staff and members alike must learn their new roles and responsibilities.

If the segment of the population that believes itself to be disenfranchised grows, than we are likely to see more fragmentation in society, including a degeneration of courtesy generally, an expansion of social unrest, and perhaps more terrorism. One response will be to recall the moral values associated with a rural life style generally, and especially with the family farm. However, that image will have little appeal to the large portion of society who have received their knowledge of agriculture through the media—newspapers, magazines, movies, and television.

Also, the gap between the haves and the have-nots (the impoverished or disconnected, who are not necessarily the same as the disenfranchised) is likely to grow because the political leverage of the have-nots appears to be dwindling, either led or accompanied by a declining level of public sympathy and support. The underlying debate here will be whether government is viewed as better at carrying out its responsibilities by allowing the creation of wealth that pulls individuals up, as was a tenet of the Reagan revolution, or by redistributing wealth so as to bring those on the lowest economic rungs up to a minimum standard, as has been a traditional tenet of the Democratic party. Many issues in agriculture will play important but supporting roles in this debate.

The evolution of communications, biogenetics, international mobility and other features of modern technology is affecting fragmentation. These changes are homogenizing society and economic activities, including agriculture, around the world. Differences are disappearing, and models of success in one country are more quickly adopted in others. Our domestic experience of declines in regional variation, by almost all measures, over the past half century will be partially replicated on an international basis over the next 50 years.

These changes in technology, especially communications, also affect how political issues are prioritized. At the heart of today's political priorities is the federal budget deficit. If the national leadership fails to successfully deal with the deficit, there will be critical repercussions in almost every federal program. Without deficit control, almost no discretionary activity, no matter how worthy, will be able to secure and maintain dependable federal support. Without deficit control, many of the agricultural programs, including conservation programs, will fare poorly and disappear quickly—deficit control will likely extend the life of some of these programs but mean the demise of others. More generally, the question of which is the desirable government role for helping those in need, outlined above, will be made largely irrelevant.

Federal support will evaporate more quickly for programs where the benefits cannot be directly demonstrated or that do not provide visible social returns, such as many data collection and analysis efforts. Many of these programs, which provide our fabric of

knowledge about changing conditions, will disappear. The resource conservation area has several programs that could suffer this fate. Also, evaluations and related efforts that assess the expenditure of federal dollars and the accomplishment of programs will grow more important as decisions about spending priorities need to be made. Perhaps most evaluation eventually will be done outside the administering agency to remove the tinge of a conflict of interest or bias in the outcome, and also to allow a comparison of accomplishments across programs and agencies. The tradeoff would be that the evaluators will have less understanding of the context. These evaluations will become increasingly high hurdles that future program operation and funding decisions will have to jump over. In short, the flexibility of the federal government generally and of its programs will be increasingly limited if the deficit is not effectively addressed.

Focusing on the politics of agriculture, the breakup of agriculture's iron triangle (the traditional political linkage between Congress, USDA, and constituent groups) into many smaller, more transitory, and less powerful relationships is already occurring, as many have recognized—and will continue. One reason is that there are no more "Jamie Whitten" types who control the political process for agriculture. Given the current inclinations of the electorate, it is hard to visualize that such representation might reappear. The decline of the seniority system will continue as newer members grow as a portion of the total and challenge vestiges of the status quo.

But in contrast to the continuing break up of the iron triangle, the decline in party discipline more generally is over. Party discipline is likely to return—both out of fear of what is being lost, and because of what it can gain the group. The recent Republican successes can be partially viewed as a triumph of discipline over fragmentation. That lesson will not be lost on members for years to come (unless, perhaps, the Republican success is transitory as well). If a legitimate third party challenge emerges, it may increase the pressure to strengthen party discipline.

Regardless of the way Congress operates, its members will have less interest in agriculture. Fewer members will seek to serve on the agriculture committees. More importantly, agriculture will be a lower priority as a component of most broad issue areas. In those broad areas where it will remain important, most notably environmental quality and international trade, agriculture will be increasingly viewed as part of the problem rather than the solution. (In the case of international trade, certainly agriculture's contribution to the balance of trade is a success, but the appropriate role of the federal government in agricultural trade will continue to be hotly debated.) This is one of several reasons why agriculture's viewpoint will carry less weight in resolving those issues. Therefore, agriculture will be a winner in more policy debates because it can ride the right coattails, not because its perspective will determine the outcome. Wins will be modest and require more compromise.

In the setting suggested in the comments above, micromanagement of agency activities will increasingly characterize agricultural legislation. The distrust by Congress that the programs it enacts will be carried out in the ways that it intends, using increasingly limited

resources, will be far stronger than any trust to let the experts at USDA do it. Also, as Congress authorizes many more activities than it can support through appropriations, it is then compelled to define its priorities for implementation each year with increasing precision. Agriculture is one of many topics caught up in a broad schism between Congress and the executive over what the executive structure should accomplish and how policies and programs should be implemented. This schism has probably existed for two centuries, but it seems to have grown more visible, and probably broader, in recent decades and will continue to grow.

Congressional changes to agricultural policies will involve images as well as facts. There will be more moralizing about the value of a rural upbringing and about rural ideals. Debate over the social aspects of agriculture and over the government role in preserving those desirable aspects will be extensive. But by the end of this time period, the small family farmer and the struggling minority farmer will have, in fact, disappeared and faded into the national mythology. The divergence between the myth of living on a farm and the reality of commercial production will continue to grow. Agricultural interests will emphasize the myth on the floors of Congress. Effectively continuing to claim these moral values will be critical to trying to keep agriculture's leverage in Congress.

This divergence between myth and reality will make the debate over the definition of what is a farm one of the loudest and most ideological debates over agricultural policy in the next 50 years. This debate will be forced by the magnitude of the divergence. Its resolution cuts to the core of agricultural politics. But in the end, the definition will be changed so that it is more limited to commercial production agriculture by excluding those who farm as a sidelight or hobby and perhaps those who derive the majority of their income from other activities as well.

The myth of agriculture will live on in our culture. It is hard to envision how much of a revisionist effort to repackage and portray agriculture can be expected, and in what ways it will succeed. For example, the media will probably treat agriculture increasingly like any other industry on the news. But for entertainment, we may well see a new popular TV show that creates the agrarian equivalent of Dr. Quinn and provides a revisionist view of agriculture through thoroughly modern and politically correct eyes that are blind to any inconsistent facts. Such changes will be widely unchallenged by a public that has less and less direct knowledge of agriculture. These images will be very important as the farm sector lobbies Congress about agriculture.

The role of the farm bill in farm politics will continue to change; the farm bill will take on less importance as a political event, and the last farm bill will be written within the next 8 to 20 years

National policy that affects agriculture will be increasingly dealt with outside the farm bill. Part of this will be caused by the decline of commodity entitlement programs. This decline will be a slow and halting process. Also, it will be a result of the continuing integration of

agriculture into the greater economy and of agricultural policy with politics that surround other domestic and international sectors. At some point, the last farm bill will have been written. That will occur only after there were more political and policy problems than solutions associated with trying to enact the most recent version.

Whenever the last farm bill is written, can the demise of one or both agriculture committees be far behind? It seems likely that—without the seminal event of a farm bill that binds together most major agricultural issues—there will be little need for a separate committee. Now, all the various interests that are involved in the farm bill process create a critical threshold for political action, reinforced by their loud claims (legitimate and otherwise) of the penalties that would accompany inaction and allow programs to recede back to their basic form of half a century earlier. But without a farm bill, almost all the issues dealt with by the agriculture committees could easily find other homes, and probably with surprising comfort in some cases.

Some will ask how farm legislation would be handled without a farm bill—FIFRA is a good example today. It continues to have trouble moving through the legislative process as a stand-alone topic because it is controversial and major interests have been happier with the status quo than with some of the compromises that would accompany reauthorization. Acceptable compromise might be easier to find within an omnibus legislative package. Similarly, many of the topics traditionally legislated in the farm bill would find greater difficulty moving as independent legislation. The status quo is more likely to prevail. This treatment would further diffuse the political stature of agriculture; the degree would depend on how agricultural topics are split up and the ability or inability to act.

Some might also ask how agricultural issues would be handled without an agriculture committee. Fisheries issues, moved from the disbanded Merchant Marine and Fisheries Committee to the Resources Committee in 1995, are a good example today. Many in the fisheries community (and in other communities served by Merchant Marine) dreaded its demise, but fisheries legislation seems to be receiving due consideration in its new venue. The greatest uncertainty when these changes occur will be about who are the new committee and subcommittee chairmen who will handle these issues, and how agricultural topics will rate among their priorities.

If the agriculture committees are dissolved, or if the executive departments are reorganized, will the Department of Agriculture disappear or be radically changed? The Department is centered on a combination of commercial agriculture and food programs; one radical change could redirect it to be the Department of Rural America. Clearly the food programs could be moved elsewhere, and there is frequent talk of moving the Forest Service into the Department of the Interior. There will also be far more talk of moving the NRCS, probably to the EPA or its successor, to provide environmental programs generally with a local delivery capability. But if those changes took place, would a viable cabinet-level Department remain? For this possible change, the past is likely to portend the future; there

will be numerous commissions and many recommendations, and considerable discussion, but little action.

One corollary to these predictions is that a declining portion outside agriculture will find reasons to care about it. At issue is whether agriculture can connect to an urban constituency. The food and feeding responsibilities now provide some of that connection for USDA. Critical questions center on whether there is anything that might happen that will make them care more. Will such events be positive or negative forces? Negative events such as the Alar scare or ground water pollution are likely to further divide and/or isolate agricultural interests, making political solutions revolve around minimizing the damage rather than gains for the agriculture sector. Positive forces, such as life on the farm or improved environmental conditions in rural America from conservation efforts, open opportunities for related policy and program gains. However, as has been the case in recent years, it is more likely to be negative, and therefore not helpful to agriculture.

In such a changed setting, conservation programs, if they are to succeed, will have to be more about rural America and less about agriculture alone. Agriculture is becoming a smaller part of the increasingly diverse rural economy. As agriculture grows more like other industry, it is becoming increasingly disconnected from the fabric of local rural living. Environmental concerns are changing the definition of conservation and becoming more important connectors between agriculture and rural (and in some topics, more distant suburban and urban) living. Water quality is clearly a current connector; others, such as watershed-based and ecosystem-based approaches, are being explored. These connectors can be political opportunities, but they must be properly nurtured.

As rural America continues to diversify economically, representation for rural America in Congress will be increasingly different and less compatible with representation for agriculture. This will lead to some political disillusionment for agricultural interests who will believe that they are betrayed by political allies. As agriculture becomes smaller and more isolated in the political setting, it will be able to deliver less and less to its constituencies. The constituencies will respond by developing revised strategies, seeking new partners, and looking to other congressional committees for support and action. These changes will reinforce the declining power of the agricultural committees.

Other topics will continue to emerge, and they will not all be tied to the physical environment; some of them will have a social context. One example is the rate and pattern of rural migration by retired individuals. As the portion of retired population grows, will the interest in operating "farmettes" expand as it did in the 1960s and 1970s, or will that interest evaporate, perhaps because a small and declining portion of the retiring population of the future will have grown up on farms, or even just in rural America? Perhaps other factors, such as lifestyle, financial costs, crime, and social decay will encourage new waves of rural migration in the future. For the remainder, agriculture may be something that is totally unfamiliar, and therefore viewed as distant and irrelevant. Just as we could not have

predicted the environmental movement in 1945, it is hard today to see how these cultural topics will play out, even though it will probably appear obvious in hindsight.

If any single change appears obvious today, it is that commercial agriculture will be increasingly separated from small-scale agriculture in policy and programs. Eventually, they may be dealt with in different laws and by different congressional committees. It seems likely that small-scale agriculture will get even more of the sympathetic rhetoric and a smaller portion of the money than today. If small-scale agriculture receives federal money, it will not be in support of commodity production, but for other purposes.

Commercial agriculture will continue to evolve. Policymakers will split commercial farming into two increasingly distinct components: domestic production and international production. Many experts are now saying that more production for both domestic and international markets will be managed under contracts and marketing arrangements. Perhaps more important for the industry of agriculture will be the rapid adoption of vertical integration into processing and marketing networks. The poultry industry may portend the future for other segments of agriculture, especially those raising feet rather than stems and stalks.

Numerous emerging and evolving themes will alter the political priorities for agriculture

Many important changes will occur to the themes that run through agricultural politics at the national level. Many of these are discussed in other papers. I will list and raise some questions about five of them before exploring several others in somewhat greater detail.

- As the only remaining superpower, will the United States actively intervene, will we retreat to the position of dispassionate observer, or will we intervene selectively? In agriculture, will we see ourselves as the world's most efficient producer or as the supplier of last resort? Will we always try to maximize all export opportunities, to selectively serve the markets of allies, or to coordinate markets with other exporting countries? What will be the rate of growth for trade of value-added agricultural products? What will be the federal role in promoting or supporting agricultural exports?
- Sustainable agriculture, wearing an ever-changing patchwork of labels, will increasingly be at the center of agricultural discussions. Will it remain at the same minimal level of political significance, or will it grow more important in the future? How will the expectations change that accompany the sustainable label? Will it be a concept that binds the diversity of agriculture or emphasizes its fragmentation?
- Some key trends that are widely heralded as the near-term future of agriculture include the biotech revolution, the information superhighway and revolution, the emergence of precision farming, and the acceleration of vertical integration. Which of these will be central to agriculture during the coming decades, and which will end up in relatively

limited niches? How many of these were identified as recently as in the last RCA process, and how accurate were the characterizations and the relevant projections?

- Population demands for land and natural resources underlie almost all investigations of the future. Will evolving settlement patterns continue to emphasize dispersal and separation with all its public costs but personal benefits, or will development start to constrict back into more confined areas with higher densities, even as the total population continues to grow? What role will federal (and state and local) political and policy decisions play in discouraging certain trends and encouraging others? Will any aspect of agriculture be an important part of such debates, and if it is not, what would have to change before it would become an important consideration?
- The debate over the definition of the environment and the relationships between environment and agriculture will continue to evolve. Some parts of the debate will have important federal dimensions; others are more likely to be recognized and responded to primarily at the state and local levels. How will the federal role change?

Property rights is currently a very visible issue. Property rights is not a narrow question limited to effects of government action that affect property values, but a broad question about landownership relationships between rights and privileges on the one hand and social obligations on the other. Congress will act on this issue, and it will cause a shift to the right. But its actions will not precipitate a major overhaul of long-standing relationships. Rather, these actions will have a chilling effect on government activities at all levels. They will be an impetus to more precisely written legislation, and may lead to further examination of how to fund and control the costs of federal programs. Most importantly for this assignment, Congress is likely to continue to tinker with this topic through most of the time span; every political change and change in policy will bring pressure for further adjustments.

Ultimately, some very innovative ideas may emerge from this process (but then again, they may not). The most interesting questions today are what will be defined as property, the evolution of the negotiation and compensation processes, how will Congress and the courts play off each other, what will be the public cost or exposure because of changes, and what innovative concepts might emerge as public policy? This may be one of the major topics that underlie broad shifts in public policy over the next half century as society debates relationships between the autonomy of the individual citizen and the role of the national government in articulating and implementing social responsibilities.

Larger scales and more complex systems will be used increasingly by policymakers as the geographic basis for programs to address certain types of environmental problems, rather than property ownership boundaries and individual system components. Currently, we hear a great deal about the ecosystem and watershed approaches both in large and rural areas like the Pacific Northwest and in small and more urban areas like the Anacostia watershed, largely within the District of Columbia. Those approaches, or something like them, will continue to appeal. Labeling the chosen process will remain a problem. Also, goals and

results will be difficult to agree on, and are likely to differ from site to site. Some will see the benefits as primarily revolving around more effective processes that lead to decisions and action, while others will see them as revolving around anticipated results that are measured by changed resource conditions. A key question is whether there will be room for both perspectives.

Congress will increasingly see that the benefits of this perspective outweigh the negatives that come from a threat to change of the status quo. Policymakers' interest will be driven by the ineffectiveness of current approaches and by reduced financial and staff resources. Scientists, who were at the forefront of developing and promoting these new approaches, will become disenchanted with the process which will translate scientific principles into policies and programs, and will largely disassociate themselves. And some agricultural interests will increasingly view larger scale approaches as a negative force that makes agriculture subservient to other interests.

Unacceptably high levels of soil erosion are likely to return. While technological advances should moderate future erosion rates, they will not have to be as high as in the early 1980s to make them unacceptable. Since the dust bowl days, this problem has emerged in 20- to 30-year cycles, and little that was learned from the preceding cycle appears to be applied to limit the next cycle. (Water quality, especially rural nonpoint pollution, may start to follow similar cycles of public concern, but the length of these cycles is impossible to forecast.) We can anticipate the next episode shortly after the turn of the century; many of the likely causes are already in place. The public will be less sympathetic to giving agriculture significant financial resources to deal with the problem yet again. The impetus to enact legislation to penalize or regulate certain behaviors will be far stronger than in the past.

One critical factor in the political response will be the commodity supply situation at the time when Congress addresses the problem; the second will be the dominant views of what CRP and conservation compliance have accomplished and where, in hindsight, they failed. It seems clear that "benevolent" but expensive responses, such as the CRP, will be less likely under any forecast.

Federal funding for agriculture programs will continue to decline. Less money will change the political dynamic in ways that will generally hurt agriculture. The partnerships that forged farm bills in the past are likely to be weakened by a lack of federal resources to be made available through legislation, and the members of these partnerships will find that they are more frequently in competition. In the political arena, a key question is whether ancillary agricultural subjects like conservation will be more hurt by association, or by divorcing themselves and being independent on more issues.

Conservation will increasingly benefit from keeping a distance from agriculture on many issues. If the agriculture committees are dissolved, or if they lose conservation responsibilities, conservation interests will find that they can succeed in many subjects through the other committees and by forming new partnerships. But this success will be

about approaches and relationships to other programs and activities, not about greater funding. This change would also mean that the Department of Agriculture's conservation programs would be given more nonagricultural responsibilities, thereby spreading resources more thinly.

Innovative approaches to replace regulation under an increasing range of circumstances will be widely accepted as national public policy before regulation for agricultural activities becomes pervasive. Agriculture will escape much of the regulatory inflexibility that almost all other industrial sectors have had to work with. This will offer the agriculture sector a number of opportunities—ones which it does not yet anticipate and may not fully take advantage of. Agriculture will be viewed increasingly as just another economic sector, but by then basic sectors will be treated differently than they were in the 1970s and 1980s. Some of these innovative approaches are just being tried; others remain to be developed intellectually before they could be implemented as programs. But clearly the period of "regulate first, then we will figure out if anything else should be done" is ending.

Agricultural conservation will remain difficult for Congress to address because it involves private lands and millions of individual decisions. These innovative approaches should provide greater flexibility to fit solutions to the worst problems, based on the way that they are defined. It may also enable Congress to discern more accurately whether federal resources are buying desirable levels of conservation.

Rural America will become a managed landscape, more like rural Europe today. This will be driven by the desire for amenity values and an effort to maintain a viable and dispersed rural population, and not by concerns about current or anticipated levels of production. Many forecasts now suggest that domestic food production will require less space, and even with the growth in supplying international markets, there will still be more land available to provide other values and give producers more flexibility in their individual decisions. This will be necessary, because as the farm programs decline, producers will assume that flexibility, whether the government wants them to or not. Farmland protection (a combination of amenities, wildlife protection, and site environmental values) and a functioning rural landscape will be more explicit federal goals and higher priorities.

A variety of indirect subsidies, such as tax policies, will support and encourage the new rural America. Congress will articulate policy statements that foster the rural landscape outcome, but the specifics will be developed at the local and, to a lesser degree, at the state level. This approach will result in considerable diversity in not only programs but also results. This diversity will be widely viewed as a positive result and lend further support to this effort. How Congress might combine this with both the innovative approaches and with working at a larger scale, mentioned above, is interesting to contemplate.

Concluding Thoughts

Reasons abound to be optimistic and to be pessimistic about agriculture's future in the federal political context. But where does one come out? Does the conclusion differ as one looks out from the perspective of agriculture, or in from the outside?

My thought is that agriculture's constituency will believe that it has been largely cast adrift in the national policy arena during the next half century. It will discover, after some floundering, that being adrift from the various lifelines of the federal government isn't so bad after all. The decline in special treatment for agriculture will be much less of a big deal in reality than it will be portrayed for political purposes. Most of the agricultural partnerships and networks built up over the past half century will flourish over the next half century, even though declining federal financial resources will remove some of the lubricant that permits the system to operate smoothly.

Agriculture will have less control over its destiny in Congress, but it will be more fully politi-cally integrated into broader political and economic settings. The integrating roles of international trade and technological innovations will be particularly important through most of this time period. This integration may serve agriculture well as policy options are debated for conservation or agriculture and the environment. Important questions like how agriculture will relate to the regulatory approach and how it will respond to a returning concern about erosion will indicate whether these opportunities will be at the forefront of evolving federal policies. The opportunities will largely come because of the changing perspective about agriculture rather than from an effort to defend and retain the status quo.

Future Environmental Policy: The State Role

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For much of the last century, natural resource policy analysts interested in agriculture have focused their attention on federal conservation policy. This attention was appropriate given that pre-1970 progressive conservation philosophies had resulted in a dominant federal role in the development and conservation of natural resources (Batie, Shabman and Kramer, 1986; Hays, 1975).

Starting about 1970, an alternative philosophy developed to that of Progressive Conservation; it focused public attention on new purposes for natural resources. The alternative philosophy was that of environmentalism, and it encompassed the agroenvironmental issues of water quality, habitat and wildlife protection, and toxics in the environment (Mitchell, 1991). Environmentalism competed with the Progressive Conservation philosophy of wise use of resources for maximum productivity. Environmentalism taught that natural resources had their own value apart from their use in production processes.[1]

The decline in the dominance of the Progressive Conservation philosophy resulted in states assuming more responsibility for the development, conservation and protection of natural resources. Enhanced interrelationships between federal and state environmental programs also occurred post-1970. Federal legislation has provided both prodding and funding for many states' environmental programs, and almost every federal environmental program has relied on the states for their implementation (Hays, 1987). The reality is more complicated, however, than the observation that the states, with varying degrees of commitment, are reacting to federal program guidance.

Far from being "recalcitrant backwaters of the special interests," many states have been leaders in the development and implementation of many environmental initiatives (Reilly, 1994). During the post-1970 environmental age, the states have grown in both their knowledge of and their capacity to address environmental problems.

Despite the growth of the importance of state environmental policy, much analysis has been directed to federal environmental policy and the role of various actors—federal agencies, the Congress, the Executive Branch, and Capitol lobbyists. Much less attention has been focused on state actors, policies, and institutions.[2] This omission is unfortunate and obscures our understanding of the future policy context for environmental issues. In the

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future, intergovernmental relations as well as unilateral state actions toward agroenvironmental problems are going to be important.

Some key questions arise as to future trends with respect to agro-environmental problems. These include the following:

* What will be the roles adopted by the various governmental levels with respect to agro-environmental problems?
* What are the characteristics of the states that will be the most "progressive" with respect to environmental issues?
* What are the implications of uneven state performance with respect to environmental policy?
* Will agro-environmental problems be greater in states that are more "regressive" with respect to environmental policy?
* What are the implications of an increasingly industrialized commercial agriculture for these relationships?
* What are the implications of enhanced information availability on agro-environmental problems and solutions?

These are important questions as we contemplate future environmental policy contexts, and they are the subject of this chapter.

Governmental Roles in Environmental Policy

While the rise of environmentalism meant that policy makers have increased their attention directed to environmental concerns, the increase in state environmental policy has also occurred as a result of the various counter-cyclical roles played by state and federal governments with respect to environmental policies. Hays (1987) traced the last few decades of history with respect to state and federal government roles in responding to environmental issues. When environmentalists were stymied at the state level, they turned to the federal government for assistance. When the federal Congress became less hospitable to environmental goals, environmentalists focused their lobbying efforts not only on the federal agencies and courts, but also on state governments.[3] Of course, when industry groups opposed to environmental legislation did not find favor within one level of government, they also turned to another level of government.

This counter-cyclical nature of state and federal roles in various public policy issues is not a new phenomenon, and it can be illustrated by numerous historical references. When liberal pro-government politicians are in power in Washington, the federal government assumes authority and power for many regulatory and social welfare activities; states are less active or resistant. In contrast, when conservatives are limiting the role of the federal government, the states appear more dominant (Nathan, 1989). At the turn of the century, for example, with a conservative federal presence, states led in child labor laws, business regulation, public welfare and educational reform.[4]

The counter-cyclical nature of state-federal politics can be seen in specific environmental programs. For example, when the Reagan administration was overtly anti-environmental, environmentalists not only turned to Congress and the courts, they also turned to the states (Hays, 1987; Ringquist, 1993). "The void left by cutback of federal controls (by the Reagan administration) was filled by state governments" (Kris, 1989, p. 2989).

For another example, in the 1970s, when some industries feared that various states would set stricter and nonuniform standards for environmental quality, they lobbied the federal government not only to establish minimal federal standards but to couple them with prohibitions on higher state standards. Battles were fought over federal-state "consistency" and federal-state "primacy" with respect to automobile emissions, nuclear reactor emissions, and coastal zone development plans (Hays, 1987). At other times, when the federal government appeared to be the more restrictive, as in establishing fees and regulations for the use of public lands, affected industries appealed to the state governments for relief.

The result of counter-cyclical forces is that not only are there state unilateral actions, but also federal legislative outcomes are heavily influenced by states' desires. Federal regulations become the end result of intensive bargaining and power-competition between the federal and state agencies.

> State governments in particular, have a habit of using their own congressional representatives to influence federal environmental regulations to their own advantage. . . . All federal regulatory agencies are acutely aware that individual members of Congress are likely to be sympathetic to and articulate about their own states' viewpoint in administering regulatory programs. (Rosenbaum, 1985, pp. 119–120)

A recent example of such bargaining is found in the Coastal Zone Reauthorization Amendments of 1990 (CZARA). When states disagreed with the federal CZARA nonpoint-pollution guidelines, the Coastal States Organization, representing the governors of the 35 coastal states, protested directly to the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. They complained that the program was inflexible; they questioned the cost and effectiveness of the required agricultural nonpoint-pollution management measures; they felt the time frame for implementation was unrealistic; and they thought that the amount of land encompassed in the coastal zone definition was too large. Their wording was strong:

> There is a real danger that several states will withdraw completely from the National Coastal Zone Management [CZM] program unless there is immediate relief granted. . . . Further . . . the entire national CZM program, which is up for reauthorization in the 104th Congress, will be in jeopardy due almost solely to the onerous agency requirements pertaining to the [nonpoint pollution] Section 6217 program. (Coastal States Organization, 1994)

Faced with a possible revolt of all the states and tempered by the new conservative climate heralded by the election of the Republican Congress, the federal agencies' response was conciliatory, and the federal agencies agreed to work with the states to develop acceptable CZARA program guidelines.

States have also taken the lead where they perceive a federal policy "vacuum" in addressing environmental issues of concern to their citizens. Such is the case, for example, with groundwater legislation. Numerous states have enacted their own groundwater protection statutes, partly in response to the absence of federal guidance (Batie, Cox, and Diebel, 1989).

Having enacted their own groundwater and other environmental legislation, states are increasingly signaling to the federal government that they do not want these state programs preempted by federal law:

> Rather than the stringent command-and-control measures that they were forced to implement under federal air and water laws, they [states] want flexibility and resources. In the groundwater protection arena for example, states want federal safety standards, scientific research and money. (Kris, 1989, p. 2993)

A robust hypothesis appears to be that the existence of state governments tends to buffer federal actions that are "too radical." Too fast a retreat from environmental goals, on one hand, and the state governments, encouraged by state-level environmental lobbyists and like-minded citizens, resist the retreat. On the other hand, "too radical" a change from the status quo toward more environmental activism is also resisted by state actions. The resulting environmental policy tapestry is woven with intergovernmental connections as well as unilateral state actions.

States' Capacity

The counter-cyclical nature of local, state and federal government roles has important implications. President Reagan's attempts to devolve regulatory responsibility to the states, as well as to de-fund these activities, also accelerated the capacity building that was already occurring at the state level to professionally manage these responsibilities (Hays, 1987; Nathan, 1989; Ringquist, 1993).

> The twin goals of devolution and de-funding that were so prominent in Reagan's new federalism campaign actually helped to energize state governments in a way that undermined the president's superordinate goal of policy retrenchment. (Ringquist, 1993, p. 77)

During the Reagan years, the states grew in professionalism. Organizations such as the National Governors' Association (NGA) added to their existing mission of lobbying the federal government for states' objectives. NGA now also provided service to the states' governors on substantive state issues such as environmental protection (Beyle, 1989).[5]

The end result is that many states now have a high level of professional capacity to manage environmental issues (Van Horn, 1989). They have their own environmental agencies, and in many cases they are extremely knowledgeable as to the information, science, and politics surrounding environmental issues. As former EPA Administrator Bill Reilly (1995) notes,

> [States] are increasingly the cockpits of innovation, of new ideas, of programmatic initiatives that work—initiatives that are copied by other states and that then find their way to Washington. (P. 16)

Thus, as more states enact environmental policies, they are increasingly setting the national environmental agenda (Kris, 1989). The cliché that states are the "laboratories of democracy" is illustrated by many of the innovations associated with state governments. The "bubble concept" in air pollution control, emissions trading, priority nonpoint pollution areas, nutrient management plans, and pesticide fees were all pioneered by state governments.[6]

States have also led the federal government in some environmental legislation. Indeed, state environmental initiatives are so numerous that just to inventory these efforts is a Herculean task; a few examples will need to suffice for illustration. New York passed the first law in the nation addressing acid rain (Ringquist, 1993). Michigan, Florida, and California pioneered the use of funds from the lease of state natural resources (e.g., oil) for the acquisition of land for environmental purposes (Hays, 1987). Pennsylvania has one of the more extensive wild and scenic rivers inventories in the nation (Hays, 1987). Wisconsin has an extensive targeted nonpoint pollution program as well as an extensive groundwater protection program.

Variation Between States

There is now considerable variation between states in the extent to which they pursue environmental goals. Hays (1991) notes that there are regions of "great strength in environmental values" (p. 27). These areas include the New England States, Florida, the Upper Great Lakes region, the Pacific Coast and the Mountain West. He contrasts these areas with the states of the mid-South, the Gulf states, and the Midwest from the Dakotas through Texas.

There have been analyses of those characteristics of states that account for these regional differences (Ringquist, 1993; Lester, 1990). Some have investigated the role of party liberalism in the state, hypothesizing that more liberal states will be more pro-environment and innovative (Erikson, Wright, and McIver, 1989). Ringquist (1993) following others (Chubb, 1985) notes that there is an important difference between the Democratic Party, which believes in using the government as an agent of positive change, and the Republican Party, which adheres more to an ideology emphasizing limited government and fewer restrictions on free enterprise. As a result, Democrats tend to be far more supportive of

environmental legislation, a fact borne out by League of Conservation Voters' scores of Congressional representatives' voting records on environmental issues. Still,

> these scores do not mean that all Democrats are stronger environmentalists than are Republicans. There are significant regional variations . . . with representatives from the East receiving the higher scores and representatives from the Midwest, West and South following in order. In fact, Eastern Republicans usually have higher LCV [League of Conservation Voters] scores than do Southern Democrats. (Ringquist, 1993, p. 32)

Other hypotheses to explain the regional differences have been that state wealth and industrialization are positive influences on the pursuit of environmental goals (Lester, 1990; Lowry, 1992). The argument with respect to wealth is that states must have resources to pursue environmental goals. Also,

> States with strong industrial sectors may enact more stringent regulations in an attempt to minimize the environmental impact of these industries. In some instances, researchers have found industrialized states aggressively regulating polluting industries to protect and enhance the state's value as a tourist destination. (Eisinger and Gormley, 1988; Ringquist, 1993, p. 89)

An additional hypothesis explaining state variation is that of organizational capacity (Lester, 1990). That is, professional legislatures and environmental agencies are assumed to have a positive influence on states' environmental progressiveness—although it can be argued that state capacity is a result rather than a cause of state environmental progressiveness.

There have been attempts to rank states' environmental "progressiveness" based on their regional differences. Lester (1990) ranked states' environmental programs. Environmental policies were broadly defined by Lester to include air pollution and land use management as well as water quality pollution. Lester's ranking is based on his measurements of two dimensions: commitment to environmental protection activities, and institutional capabilities. He divides the states according to their high commitment to environmental protection and strong institutional capabilities to follow through on that commitment (environmentally *progressive* states), strong commitment but limited resource and/or institutional capabilities (the *strugglers*), weak commitment but strong institutional capabilities (*maintainers of the status quo*), and weak commitment and limited institutional capabilities (environmentally *regressive* states). Figure 1 displays Lester's rankings.

Lester (1990) sees the "Environmentally Progressive States" as those with already substantial improvements in environmental quality, and he expects future implementation of more environmentally oriented legislation. The "Struggler States" have the commitment but limited institutional capacity. "Progress probably will be made in these states, but it will be slower and probably less innovative than in progressive states" (p. 73). "Status Quo States" are maintainers of the status quo and include states dominated by the energy industry. "The

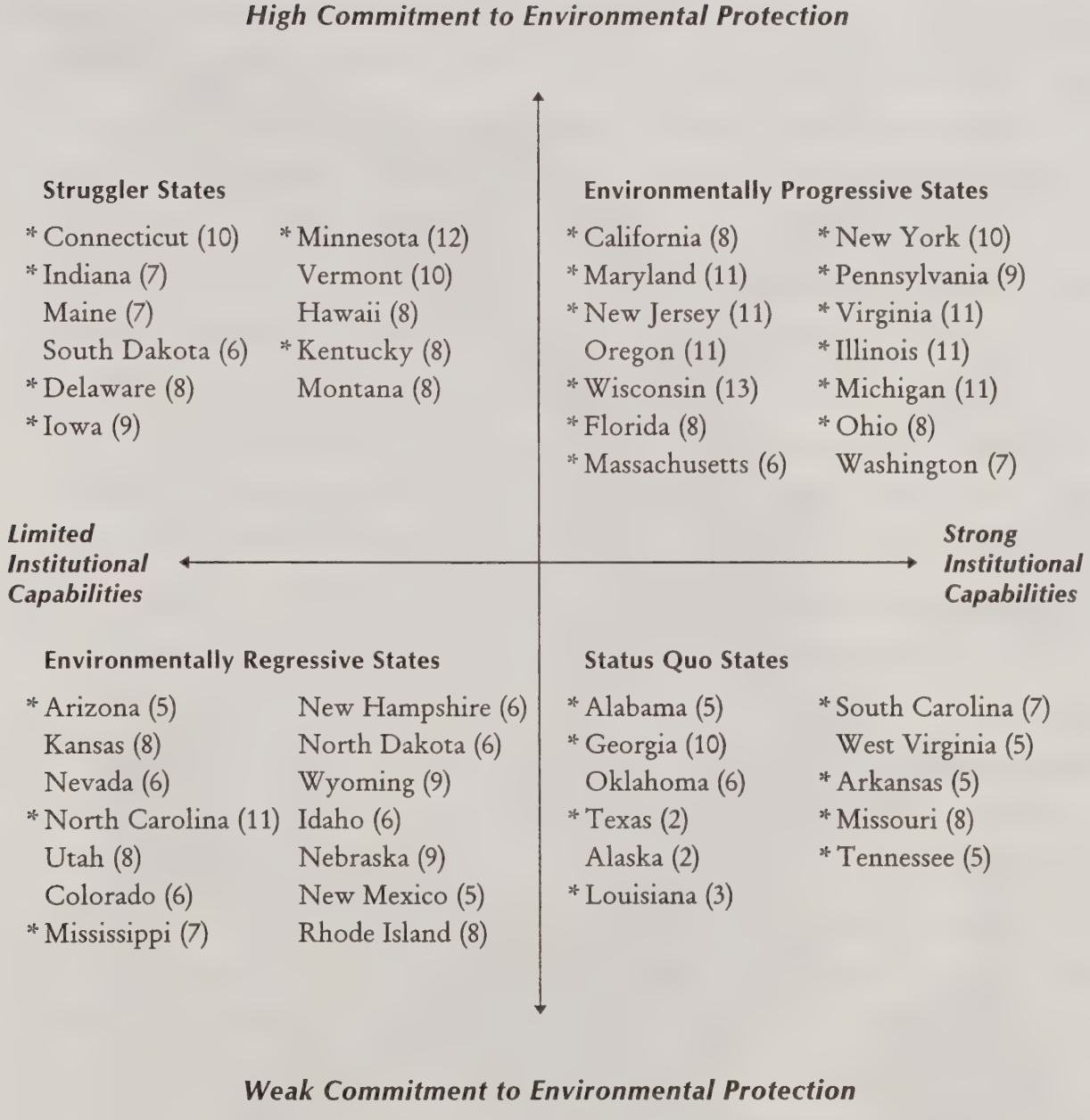

FIGURE 1. Variation in state environmental policies

Categorization according to Lester (1990); numerical rankings according to Ringquist (1991). Asterisk indicates agro-environmental problems identified by Reichelderfer-Smith (1994), using Heimlich (1994) data.

major issue in these states will be apathetic state bureaucracies. . ." (p. 74). The "Regressive" states are those for which "state decentralization of federal programs will likely be a disaster. They may fail to adequately implement federal laws in this area, and they are unlikely to take independent actions" (p. 74).[7]

A refinement of Lester's ranking is provided by Ringquist (1993) in that Ringquist focused only on water quality programs. Thus, his rankings are more applicable for agriculture. Ringquist (1993) developed a quantitative ranking system based on the strength of the states' water pollution quality programs. He used FREE rankings[8] and a ranking system on state water policy innovation found in the Green Index developed by Hall and Kerr (1991). He notes that these rankings are excellent with regard to state responsibilities embedded in the Nonpoint Discharge Elimination System as well as the state efforts in controlling nonpoint pollution. He modified the rankings by adding points for those states that had an approved industrial pretreatment program, a toxic water pollution control program, authority to regulate federal facilities under the Clean Water Act, a wetlands protection program and a groundwater protection program. He then ranked the states in ascending order from one (weakest) to thirteen (strongest).

A comparison of the rankings of Lester with those of Ringquist does not yield complete agreement as to the classification of states. Figure 1, which lists the rankings compiled by Lester, also includes Ringquist's numerical rankings in parentheses following each state name. A major disagreement between the two rankings is North Carolina, which is ranked quite high by Ringquist and is labeled as environmentally regressive by Lester. North Carolina has a strong point-pollution problem which may account for the difference in the two rankings. Ringquist had 22 states with scores of seven or below. Using the ranking of seven as the approximate division point between bottom and top states, Ringquist disagreed on rankings for eight of Lester's 25 "bottom states" characterized by weak commitment (i.e., environmentally regressive and status quo states). In contrast, Ringquist disagreed with only five of Lester's high-commitment 25 states (i.e., progressive and struggler states). Of these five, three (Washington, Indiana and Maine) had a Ringquist ranking of an "on-the-border" score of seven. Thus, the two scoring techniques show considerable agreement as to the more environmentally "progressive" states.[9]

Figure 2 is a graphical identification of the two rankings. On Figure 2 the cross-hatched states are the top 20 states in environmental policy that were identified by both Ringquist and Lester. The solid grey-colored states are those identified as "bottom" states in terms of environmental policy commitment by both Lester and Ringquist. The cross-hatched states identified by both Lester and Ringquist are almost identical to those identified by Hays (1991) as having "great strength in environmental values." Hays (1987) notes that these states tend to be those associated with a higher degree of urbanization, but feels that a more valuable insight might be that these states are characterized by strong environmental values. "Studies have found that states' citizens' public opinion is strongly correlated with state policies. . . . [The] ideological preferences of state electorates play an important role in

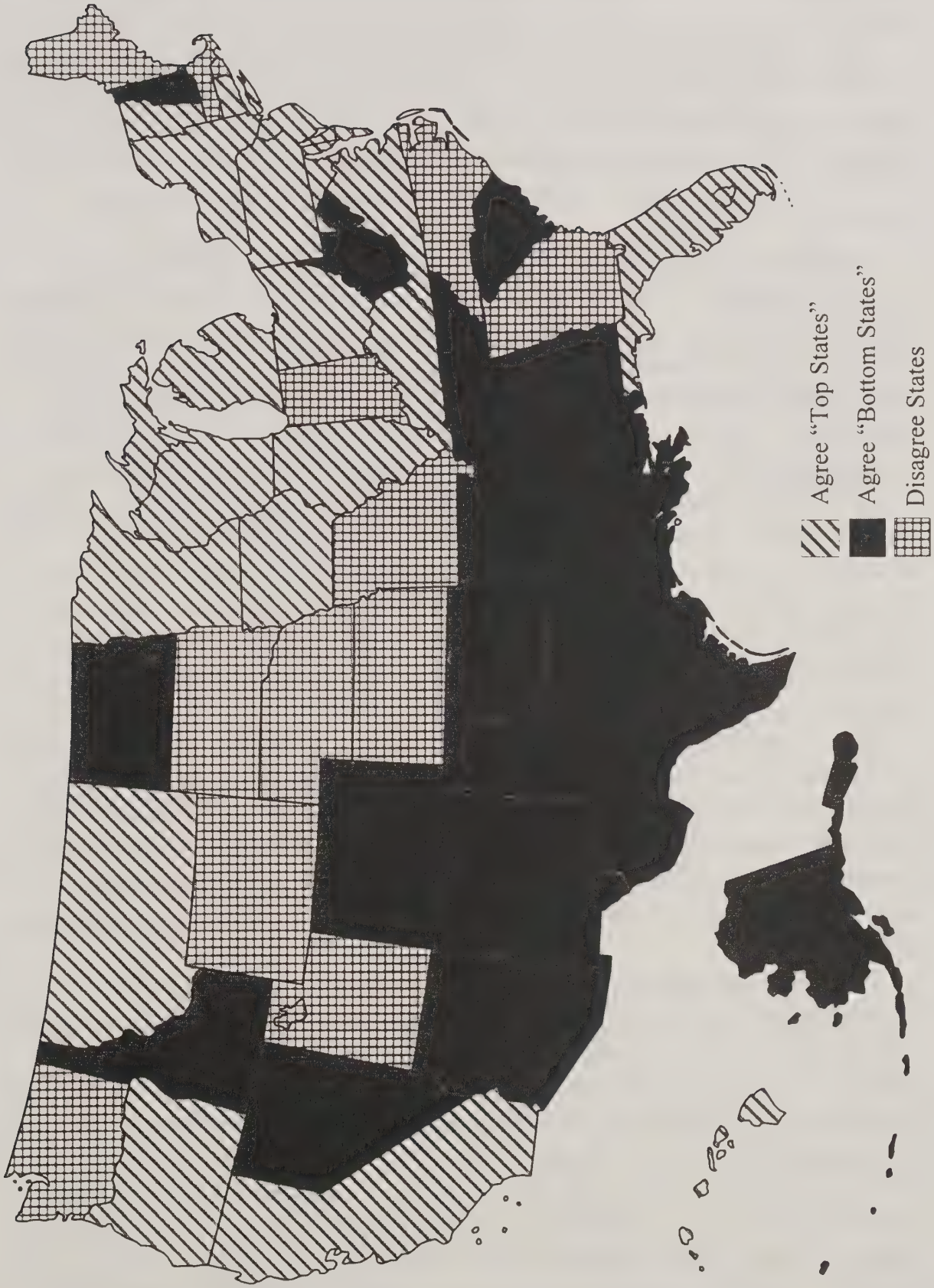

FIGURE 2. State environmental policy

determining the ideological tone of state policies" (Erikson, Wright and McIver, 1989, p. 730).

Lowry (1992) concludes that the relative level of pollution in a state may also be a factor in state environmental progressiveness, as is the discretion afforded states by the federal government. Because states have always had primacy over nonpoint pollution efforts (Ringquist, 1991), one can anticipate that those states having the most agro-environmental problems would also tend to be the most active with respect to nonpoint pollution problems.

The asterisk on some states in Figure 1 identifies those states that rank highest in "population-weighted" severity of agro-environmental problems as measured by Heimlich (1994).[10] These states are mapped in Figure 3. In the map, the cross-hatched states are those with many agro-environmental problems, which also were ranked by Lester and Ringquist as having high commitment to environmental protection. The solid grey states are those which ranked high with respect to agro-environmental problems but were considered "bottom states" with weak commitment to environmental protection by both Lester and Ringquist. The checker-patterned states are those which have agro-environmental problems but on which the rankings disagreed. There appears to be a good correlation of agro-environmental problems with the high-commitment states as measured by either Lester or Ringquist; 15 of the top 25 states ranked by Lester have asterisks. Twenty of the top 28 states ranked by Ringquist have asterisks, indicating serious agro-environmental problems as weighted by population. However, Lester's rankings are for all environmental programs and Ringquist's are for only point and nonpoint pollution programs.

Eight agreed "bottom" states with low commitment to environmental protection have asterisks (that is, they have serious agro-environmental problems as weighted by population). Thus, the existence of an agro-environmental problem does not necessarily translate into a high-commitment, state-level environmental program. Admittedly, the rankings tend to measure program design and not actual implementation outcomes. However, the rankings—albeit imperfect—do demonstrate considerable variability in state environmental programs.

There are several implications of uneven state environmental programs. First, decentralization of environmental programs will have uneven impacts, particularly where programs are voluntary (Reichelderfer-Smith, 1994). The states colored solid grey on Figure 3—Arizona, Texas, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, and South Carolina—are the least likely to respond to a decentralized federal presence in nonpoint environmental issues by expanding state efforts.

Some are concerned that uneven state programs may mean that the low-commitment states may prove attractive to potentially polluting industries such as confined animal production (Lester, 1990; Reichelderfer-Smith, 1994). However, it is not clear whether agricultural production activity is expanding more rapidly in those states which are less environmentally "progressive." Livestock expansion in the less environmentally

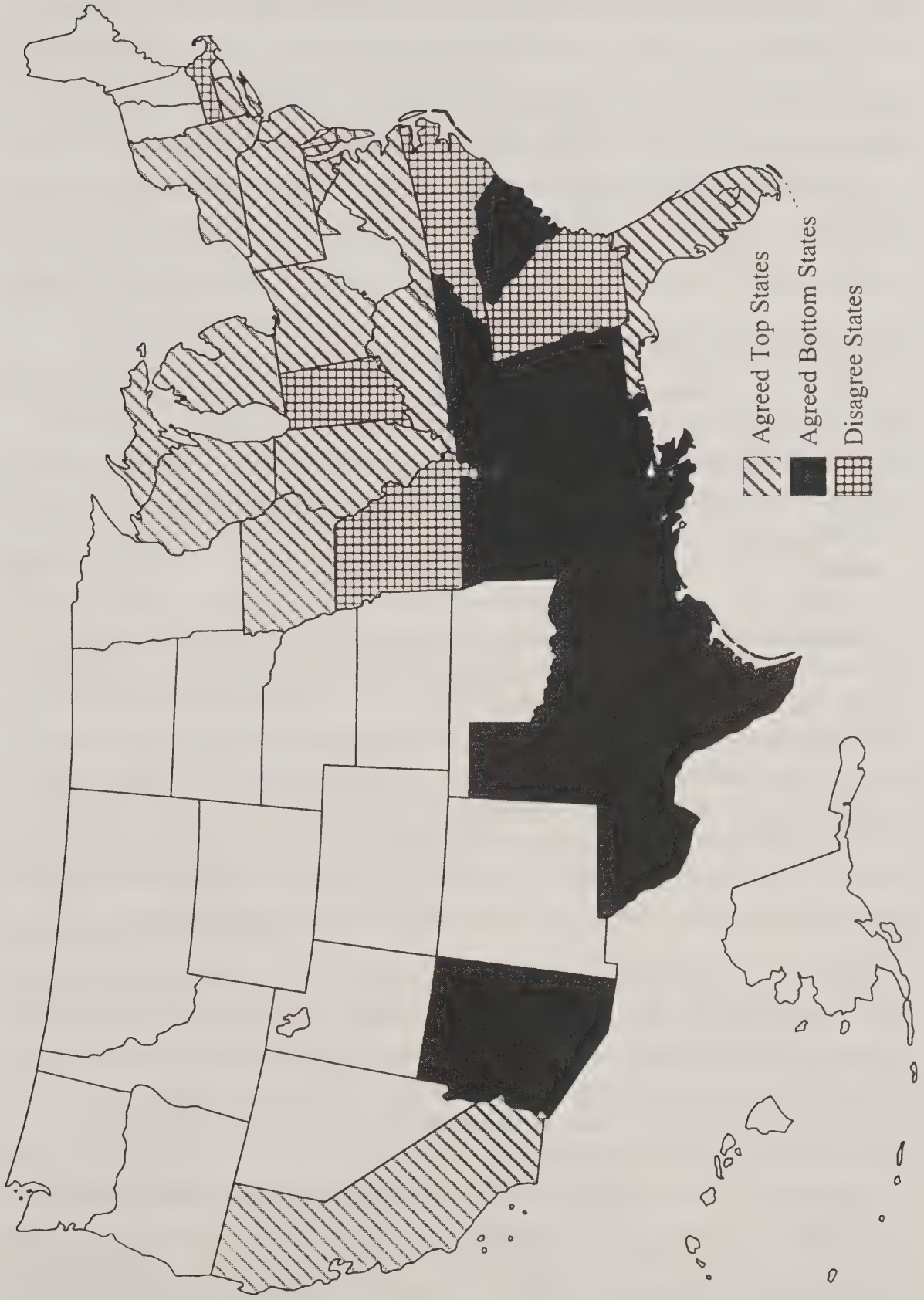

FIGURE 3. Agro-environmental problems and state environmental policy

"progressive" states of Nevada, Arizona, Texas, and Arkansas would seem to suggest that such location decisions are being made. However, livestock expansion is also occurring in Iowa, Ohio, and California, which have higher rankings by both Lester and Ringquist.

There is considerable empirical evidence applicable to many nonagricultural industries to indicate that environmental policies are rarely the major factor influencing industrial location (Lowry, 1992; Jaffe, Peterson, Portney, and Stavins, 1993). Thus, it is most likely an oversimplification to attribute the location of clusters of agricultural activities to lenient environmental rules (Purvis, 1995). Livestock expansion may be occurring in states which have low commitment to environmental policies for other reasons—such as warmer climates or lower cost inputs, including labor and location vis-à-vis processors or consumers.

The Rise of the Information Age

What does the counter-cyclical nature of federal-state roles and the variation of state agro-environmental policies imply for the future? The question is exceptionally difficult to answer, in part because agriculture itself is undergoing major restructuring, a trend that is likely to increase with the decline in the influence of federal agricultural policies. Agriculture as an industry is increasingly both global and consumer-focused. Coordinating mechanisms such as contracts and vertical ownership arrangements are becoming dominant, in part because they assure that final products will embody the attributes which are desired by consumers and for which consumers are willing to pay. Currently, the trends are most evident in livestock production, but increasingly specialty markets are opening for diversified crop products as well (Barkema, 1994).

Will a more global, consumer-focused agriculture be more or less environmentally friendly? One argument is that these trends bode poorly for the ability of states (or the federal government) to maintain a profitable, globally competitive agriculture that also is environmentally protecting. The rise of the transnational corporation may mean that firms are able to avoid social responsibility for the environment mainly by threats of moving to new production locations if environmental protection is too expensive (Bonanno et al., 1994).

The counterargument is that agriculture's industrialization and sheer size place it under public scrutiny with little legitimacy to be exempted from societal rules. Agriculture is becoming just another business sector, subject to the same scrutiny as other sectors of the economy. Furthermore, international institutions may evolve so as to "harmonize up" environmental regulations to assure both food safety and environmental protection (Hefferman and Constance, 1994).

As agriculture appears less unique and more like other industries, agriculturalists will find less public sympathy when using production practices that result in unacceptable agro-environmental problems.[11] Increasingly, scientific research is able to identify which agricultural practices and products are producing agro-environmental problems, as well as the ultimate impact of such problems on human and ecosystem health and also on recreation

and amenity values. For example, science is "closing in" on which active components of agrichemicals, in which doses, following which environmental pathways, cause which type of damages.

The results of such environmental damage information, coupled with consumer demands, should be the acceleration of new technologies with more environmentally benign attributes and the creation of acceptance for change among farmers and agribusiness. Some food companies, such as McDonald's, have already adopted numerous changes in their production practices, a result of a joint effort between the Environmental Defense Fund and McDonald's (Millstone and Watts, 1992). Gerber's, responding to consumer preferences, promises no detectable pesticide residues in their baby food products. Monsanto not only reduced the volume of waste left over from the manufacture of the pesticide Roundup, they discovered a new formula that is now saving the company $75 million a year (Millstone and Watts, 1992). The president of John Deere (perhaps with an eye toward potential profits from precision farming) notes, "Successful farmers will be those who manage their operation for maximum yield and efficiency without severe impact on soil, air, and water, delivering a quality product that meets the specifications consumers demand and still make a profit at it." Chemical companies are beginning to use Geographic Information Systems to identify those areas where a potential new product could most safely be used, based on the land's attributes.

Thus, the counterargument to the one that argues that industrialization of agriculture bodes ill for environmental values distills to one that argues that it can be both profitable, liability- and risk-reducing, and good public relations for a global consumer-focused agriculture to be more environmentally protecting. The rise of new technologies (such as on-the-go sensing and biotechnologies), new information (such as that on ecological systems), and consumer demands for improved production practices should encourage a resource-protecting philosophy in agricultural industries and resource-protecting state and international organizations.

Implications for the Future

The political context for agricultural environmental policy ten (or fifty) years in the future depends on many factors. These include the role of the states; public attitudes; and the implications of a global, consumer-focused, industrialized agriculture for environmental quality.

The last decades have sharply increased the interdependence of governmental levels (Chubb, 1985). The partnerships associated with this complex political tapestry mean that environmental policy will evolve within many governmental levels and, most likely, will result in uneven patterns of environmental quality across the states. A federal de-emphasis and defunding of agro-environmental programs will not necessarily translate into state de-emphasis and defunding. However, my best guess is that the overall impact will probably be

a "ratchetting-up" of environmental policy goals as the most progressive states are imitated by other states and may influence the federal agenda.

The ability of the states to respond will, however, be challenged by budget constraints, particularly as states manage the rising costs of prisons, transportation, and health care (Bowman, 1986). These pressures mean there will be a search for low-cost but effective environmental policies in lieu of more expensive command and control policies (Kraft and Vig, 1990). Experimentation will be common.

While there are many factors that appear to influence a state's "progressiveness" with respect to environmental legislation, the attitudes and opinions of the state's citizens appear exceptionally important. Public attitudes toward the protection of environmental quality are robust; indeed, the protection of the environment can be considered a "core value" of American society (Ladd and Bowman, 1995). Yet, rarely does that core value influence the results of a particular election; but the regional strength of such core values does influence state policies and enforcement. As a particular agro-environmental problem gains salience—that is, importance to a particular place at a particular time—these core values should be reflected in effective political power for the protection of environmental quality.

The public attitudes that will politically count will be those that reflect the preferences of suburbanites (Caldwell, 1990). That is, the reapportionment of voting strength in the 1962 U.S. Supreme Court decision (Baker vs. Carr) in conjunction with the 1961 Voter Rights Act led to the so-called "one man, one vote rule." This reapportionment means that suburbanites' preferences tend to dominate political action. These suburban preferences are more likely to reflect environmental values than they are likely to reflect traditional rural values. Thus as a state gains in suburban population, coupled with a politically salient agro-environmental problem (such as expanded livestock enterprises), one can predict that the state will eventually move toward more rigorous protection against nonpoint pollution.

The implications of a restructured agriculture are more problematic. The rise of a global, consumer-focused agriculture embedded in an information-rich world economy may result in private industry responses that are protective of environmental quality. International institutions may arise to reduce variations in environmental quality standards and production practices between trading regions.

On the other hand, fear of the loss of competitiveness in agricultural sectors may inhibit state response to agro-environmental problems; perceived or real losses of corporate profits may mean that some agricultural sectors continue to produce agro-environmental problems as a result of their production practices. International institutions may stick to trading rules that exclude social responsibility. We know we will have an agricultural commercial industry that is global and "high-tech"; whether it is also eco-sensitive remains to be seen. My best guess is that it ultimately will be—in response to consumer demands, as well as international, federal, state, and local environmental policies.

Notes

1. Today's environmental controversies stem in part from the clash of these two philosophies. "From the broadest point of view, environmental controversy arises from the impact of new environmental consumer impulses on older institutions of material production rooted in earlier manufacturing and agricultural eras" (Hays, 1991, p. 28).

2. Even less attention has been focused on local policies and institutions. While this paper addresses the state roles, analogies can be drawn to local roles.

3. There is considerable empirical evidence that lobbying at the state level does not yet reflect the diversification of interests seen at the federal level. Furthermore, groups representing the dominant economic interests tend to be the more influential (Ringquist, 1991). A possible future scenario, then, involves increased diversification of state lobbying groups and more power sharing with environmentally oriented groups. This power sharing might be partnerships. For example, Pheasants Forever and Ducks Unlimited might join forces with farm groups to support compensated protection of wildlife habitat on private lands.

4. Bowman and Kearney (1986) conclude however that state resurgence is not merely a result of federal "default" on certain issues but also is a result of state institutional reforms and improvements in the "structures and processes of government." Van Horn (1989) attributes some of the strengthening of states to the reapportionment of state legislatures and the enactment of civil rights legislation.

5. This generalization of state ascendancy in environmental legislation during the Reagan years does not diminish the complaints by states that the federal defunding of programs created hardships. As federal grants were cut, states had to manage increased responsibility with fewer dollars. Because some of the devolution of authority came in the form of federal requirements for state actions, states have come to term this devolution of responsibility as "unfunded mandates." Reductions in federal funding also constrained the ability of states to respond to unfunded mandates (Davies, 1984).

6. Another example of states setting the federal agenda came in the summer of 1989 when eight New England states effectively set national air pollution control standards by adopting California's strict automobile emission standards (Kris, 1989).

7. Other researchers hypothesized that this relationship exists with respect to state policy innovations (see Gray, 1974; Walker, 1969; Sharansky and Hofferbert, 1989). Lowry (1992) broadens the argument by concluding that federal involvement in an environmental policy, coupled with the state's competitive position vis-à-vis other states with respect to the industry involved, can explain why pollution control policies vary between states.

8. FREE rankings are comprehensive measures of state efforts to control pollution compiled by the Fund for Renewable Energy and the Environment (now Renew America) (Fund for Renewable Energy, 1987).

9. The differences between the two rankings are possibly explained by strong individual state environmental programs focused on a single problem area. For example, Nebraska has strong groundwater quality and quantity protection legislation to manage groundwater used in critical areas. Since Ringquist's ranking emphasized water quality programs, Nebraska's groundwater legislation may account for its inclusion in Ringquist's "top states" despite the state's exclusion in Lester's more comprehensive ranking.

10. Referring to a 1982 Continental Group study of environmental attitudes, he notes that environmental values tend to be associated with the desire for higher levels of personal and career achievement; developmental values tend to be associated with the search for job security and with more modest levels of aspiration. Furthermore, developmental values tend to be held by those who turned to religion when in difficulty, and environmental values tend to be held by those who turned to science when in difficulty. Thus, Hays concludes (1991) that environmental values tend to accompany the leading edge of change rather than the older and more traditional ways of thought.

11. This analysis borrowed from Reichelderfer-Smith (1994), who used Heimlich's (1994) composite index of agro-environmental problems and applied it to Lester's ranking.

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"Taking" the Taxpayer

Wetlands and Farm Subsidies in Perspective

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Executive Summary

Wetlands, and federal efforts to protect them, have become the subject of considerable controversy in recent years. Many in the agriculture community have claimed that federal wetlands laws—including the "swampbuster" provision of the 1985 and 1990 Farm Bills that disqualifies farmers who drain wetlands to grow crops from receiving federal farm subsidies—have "taken" private property rights, lowered property values, and placed an enormous acreage of land off limits to agriculture.

These claims should not be taken at face value. The Environmental Working Group (EWG) has undertaken a review of data publicly available from the U.S. Department of Agriculture to determine the actual extent to which swampbuster, and wetlands protection laws generally, impinge upon the privileges of property ownership and on the flow of federal subsidies to farmers. EWG's analysis found the following:

Wetlands occupy a small area of the agricultural landscape. Although some parts of the country still retain a significant acreage of wetlands, many agricultural areas have experienced a virtual wipeout of their original wetlands acreage. Many counties in agricultural areas had few wetlands to begin with.

Most wetlands susceptible to conversion have already been lost. For every acre of wetlands deemed by USDA to have any potential for conversion to cropland, two acres of wetland have already been drained, cropped, or otherwise put to agricultural use. Twelve acres of wetlands have already been converted to agriculture for each acre of wetlands "likely" or "very likely" to be converted to cropland in the foreseeable future.

Swampbuster has had an insignificant effect on the flow of taxpayer-funded benefits to farmers. Of the more than $34.1 billion in direct farm subsidies paid to the 49 Congressional Districts represented on the House Agriculture Committee between 1987 and 1992, only $4.2 million (0.0124 percent) has been withheld under swampbuster. In those same districts, total farm subsidies issued over ten years could have purchased every acre of wetland susceptible to conversion nearly five times over. Nationwide, the flow of money to farmers has increased farm land values by between $83 billion and $111 billion.

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Based on these findings, EWG offers the following conclusions:

The nation's taxpayers should not be forced to subsidize continued wetlands loss. If Congress significantly weakens swampbuster, then all farm subsidies, including price and income supports, that create incentives for wetlands destruction should be immediately halted.

The nation's taxpayers should not be forced to pay twice for farm subsidies. H.R. 925, a bill recently passed by the House of Representatives, would create a new entitlement program to compensate landowners whose property values have been reduced by swampbuster. This approach forces taxpayers to pay twice: once for farm subsidies that artificially inflate property values, and once to compensate landowners at this artificially inflated rate. If a new "takings" entitlement program is passed into law, the only way for taxpayers to avoid paying twice for farm subsidies is to halt those subsidies entirely.

Regardless of whether H.R. 925 passes, a large portion of the commodity program budget should be shifted into incentives for permanent restoration and protection of farmed wetlands, previously converted wetlands, and wetlands vulnerable to conversion. Paying for permanent wetland protection would be cheaper than the existing farm subsidy system, and would prevent taxpayers from paying repeatedly, year after year, to protect the same wetlands.

Wetlands in the Agricultural Landscape

Wetlands occupy a small fraction of U.S. land area outside Alaska

Although wetland protection has been a source of considerable controversy, wetlands actually make up a small portion of the total land area of the nation. Even in many agricultural areas, the controversy over wetlands is disproportionate to their presence in the landscape. USDA's *National Resources Inventory* (NRI) indicates that there are 87.7 million acres of wetlands remaining on nonfederal lands outside Alaska (figure 1), about 4.5 percent of all nonfederal land (*see box on facing page*, Wetlands and the USDA National Resources Inventory). Although significant wetlands acreage remains in some parts of the country—particularly northern Minnesota and Maine, the Great Lakes region, and the Gulf Coast and South Atlantic regions—many parts of the country have experienced virtual wipeouts of their original wetlands acreage.

Using NRI data aggregated for the counties that comprise congressional districts, EWG estimates that the 49 congressional districts represented on the House Committee on Agriculture have within them 633.8 million acres of land. Nonfederal wetlands within those districts, however, account for only an estimated 31.7 million acres, or roughly 5 percent of the total land area in those districts (figure 2). Wetlands comprise a slightly higher percentage of total land area in House Agriculture Committee districts than in the United States as a whole (excluding Alaska): of the 1.94 billion acres of land in the United States outside Alaska, only about 4.5 percent is nonfederal wetland.

Wetlands and the USDA National Resources Inventory

In the fall of 1994, EWG obtained a database of information from USDA's National Resources Inventory (NRI) for 1982, 1987, and 1992. The NRI, conducted by the Natural Resources Conservation Service (NRCS) every five years, provides a snapshot of soils, land use, earth cover and other resource conditions on rural nonfederal lands, including wetlands. NRI data are collected at random sampling sites selected to allow for statistical reliability in national, regional, state, and substate analyses.

Data for the 1982 NRI were collected at more than one million sample locations in all states except Alaska. For the 1992 NRI, data were collected from more than 800,000 locations by NRCS field personnel and resource inventory specialists. Most 1992 sample points were part of the 1982 inventory and were field-visited at that time, but only a portion were revisited for the 1992 survey. For the remaining points, remote sensing techniques, especially photo-interpretation, were used to gather much of the data. For each sample point, the NRI maintains more than 200 pieces of information documenting the soil type, earth cover, wetland status, ownership class and other characteristics of the land.

The NRI classifies wetlands according to a simplified system based on the 1985 Farm Bill classification system. This system is used in this report.

- Areas designated as *wetland* meet the NRCS definition of wetlands (hydric soils, hydrophytic vegetation, and wetlands hydrology) and generally were not drained and farmed before 1985. Wetland areas may be farmed "under natural conditions," such as drought, without any swampbuster penalty, provided that they are not drained or otherwise converted. The NRI lists 87.7 million acres of wetland in the country, outside Alaska.
- Areas that meet the NRCS definition of wetlands but were partially drained and used as cropland or pastureland before December 23, 1985 (the date of passage of Swampbuster), are designated *farmed wetlands*.These areas have been manipulated and may have lost some of their original functions, but generally are flooded for at least 15 consecutive days during the agricultural growing season.[1] The NRI estimates that there are 3.9 million acres of farmed wetland in the country.
- Areas that were drained or otherwise converted to agriculture before December 23, 1985, and are flooded for fewer than 15 consecutive days during the agricultural growing season, are designated *prior converted*. These areas may be farmed or further drained without restriction. The NRI estimates that there are 3.9 million acres of prior converted cropland in the country.
- Areas drained or otherwise converted to agriculture after December 23, 1985, are designated *converted wetlands.* These areas include potential swampbuster violations. The NRI indicates that there are 286,400 acres of converted wetland in the country.

[1] *See notes*, pages 44–45.

In 19 of the House Agriculture Committee districts, EWG estimates that nonfederal wetlands occupy one percent or less of the total land area. In 12 other House Agriculture Committee districts, EWG estimates that wetlands occupy more than 1 percent but less than 4 percent of the total private land. In other words, in 31 of the 49 districts represented on the House Agriculture Committee, we estimate that wetlands account for less than 4 percent of the total land area. As a point of comparison, EWG estimates that the total acreage of cropland, horticultural land, hayland, and pastureland, Conservation Reserve Program land and other farmland in those 49 districts exceeded 242.1 million acres, more than 7.6 times the total acreage of wetland. Rangeland in those districts comprised an additional estimated 142.4 million acres, nearly 4.5 times the total acreage of wetland.

Agricultural drainage and degradation have caused massive wetlands loss. Historically, the nation has experienced a substantial loss of wetlands to agriculture. Based on NRI data, more than 52.6 million acres of nonfederal wetlands nationwide were drained and converted to cropland before December 23, 1985, the date of passage of swampbuster (figure 3). These areas, predominantly found in the Corn Belt, along the Mississippi River, in California's Central Valley and in scattered regions along the east coast, are exempt from both swampbuster and Section 404.

Among the 49 Congressional Districts represented on the House Agriculture Committee, 14 districts contain a larger acreage of completely converted wetlands than of undrained wetland (table 1). Eleven districts have more than a half-million acres of prior converted wetlands (figure 4). Five districts—the 8th district of Missouri, the 15th and 18th districts of Illinois, the 5th district of Iowa, and the 8th district of Ohio—have more than ten acres of completely converted wetland for each acre of undrained wetland that remains. Many remaining unconverted wetlands in such districts have been severely degraded by pollution, sedimentation, destruction of surrounding habitat, and changes to the patterns of water flow. These degraded wetlands in many cases can recover much of their diminished value through appropriate restoration and management.

In addition to the 52.6 million acres of fully converted wetlands, 3.9 million acres of wetlands (designated as "farmed wetlands" under the NRI) were *partially* drained or otherwise converted to cropland or pastureland before December 23, 1985. These areas often retain significant wetland characteristics and are generally flooded at least 15 consecutive days during the agricultural growing season.[1] An additional 4.2 million acres of undrained wetlands were used as cropland in 1982, 1987, or 1992, and 5.7 million acres of uncropped wetlands were used as pastureland at least once in those years. More than 286 thousand acres of wetland were listed as having been "converted"—either fully or partially drained, or with drainage increased, so as to make the production of an agricultural commodity possible—between December 23, 1985 and the time of the 1992 NRI.

Based on these data, the total acreage of all wetlands used for agriculture—wetlands fully or partially converted before 1985, converted after 1985, or used as cropland or pastureland under natural conditions—exceeds 66.7 million acres. According to the same survey, wetlands

outside Alaska that remain under swampbuster jurisdiction, and were not used for cropland or pastureland in 1982, 1987, or 1992, total 77.8 million acres. In simplest terms, for every 100 acres of unfarmed, undrained wetlands that remain in nonfederal ownership, roughly 86 acres of nonfederal wetland have already been drained, converted, or otherwise used for agriculture.

Most wetlands are not vulnerable to conversion. The small area of remaining wetlands certainly calls into question the contention by many in agriculture that federal wetland protections stifle agricultural production and intrude heavily on private property rights. The contention is challenged even more by USDA's own assessment that most of the remaining wetlands are not even good candidates for conversion to agriculture.

The NRI measures the potential for currently uncropped lands to be converted to cropland "within the foreseeable future."[2] This determination is based on recent commodity prices, development costs, and evidence that similar land has been converted to cropland in recent years.[3] Nationwide, 45.7 million of the remaining 77.8 million acres of wetland not used for agriculture had "zero" potential for conversion to cropland in 1982, according to SCS. Based on these data, only 32.1 million acres of remaining wetland—37 percent of the remaining undrained wetland and 1.6 percent of the total landscape—had *any* potential for conversion to agriculture in the near future. We noted earlier that 66.7 million acres of historic wetlands have already been fully or partially utilized as cropland or pastureland. Thus, for every remaining acre of unfarmed wetland with *any* potential for conversion to cropland, at least two acres of wetland have already been drained, cropped, or put to other agricultural use.

Even this figure may overstate the extent to which federal wetlands regulations impinge on farmers' ability to convert their wetlands into cropland. For just over 26.5 million of the 32.1 million acres of vulnerable wetland, conversion in the next 10 to 15 years was deemed possible but "unlikely." Conversion was deemed "likely" or "very likely" for only 5.6 million acres of vulnerable wetland. For every acre of wetland considered "likely" or "very likely" to be converted to cropland in the foreseeable future, nearly 12 acres of wetland have already been converted to agricultural use.

Impact of Swampbuster on Farm Payments

Swampbuster has had virtually no effect on the flow of income from taxpayers to farmers

EWG analyzed USDA data on farm subsidy payments withheld as a result of swampbuster violation between 1987 and 1992 (*see box*, Analysis of Farm Subsidy Payments, *overleaf*).[4] During that period, swampbuster violations resulted in denial of a total of $6.8 million in farm subsidies nationwide. Roughly $4.2 million of this total was denied for swampbuster violations in Congressional Districts represented on the House Agriculture Committee (table 2). Twenty-seven of the 49 Agriculture Committee districts—55 percent—reported no swampbuster penalties at all during the period. In 7 districts, a total of $10,000 or less in payments was denied. At the other end of the spectrum, three districts—MN–7, ND–1 (At Large), MN–2, and SD–1 (At Large)—accounted for more than $3.4 million of the $4.2 million in swamp-

Analysis of Farm Subsidy Payments

In the fall of 1994, EWG obtained a computerized database of USDA farm subsidy payments through a Freedom of Information Act (FOIA) request to USDA's Agricultural Stabilization and Conservation Service (ASCS, now the Consolidated Farm Agency, or CFSA). EWG's farm subsidy database contains detailed, producer-by-producer records of each check written to each program participant[4] for all of the major farm subsidy programs, from 1985 through the fall of 1994 (calendar years). The data were compiled to obtain program-by-program totals for each individual, corporation, or other entity receiving farm subsidies at any time from 1985 through 1994. Data were also aggregated to derive estimates of total, per-person, per-year, and per-recipient payments for the nation, as well as for each county, state, and congressional district in the country.

Through a separate Freedom of Information Act request, EWG obtained CFSA's complete computerized database of all swampbuster penalties in all counties in the country from 1987 to 1992. An examination of the two databases shows that, despite the controversy the farm community has generated about the program, swampbuster has denied only a minuscule amount of money to farm subsidy recipients.

buster penalties, over 80 percent of the penalties in Agriculture Committee districts and half of the total penalties during that period nationwide. In the district with the highest dollar value of penalties, the 7th district of Minnesota, swampbuster withheld just over one million dollars in farm subsidies, nearly a fourth of the total penalties for the entire committee.

During the same 1987 to 1992 period, EWG estimates that total direct payments for programs in the purview of ASCS/CFSA totalled $68.3 billion for the nation as a whole. Subsidy payments to producers in counties represented on the House Agriculture Committee exceeded $34.1 billion. Proportionally, swampbuster penalties constituted 0.01 percent of total farm subsidy outlays for the nation. Penalties in Agriculture Committee districts totalled 0.0124 percent of direct farm subsidy outlays, or less than $1.25 in penalties for every $10,000 in direct payments to subsidy recipients in Agriculture Committee districts.[5] Although some producers were initially found in violation of swampbuster but had penalties overturned on appeal, only about three out of every 10,000 producers in Agriculture Committee districts who participated in farm subsidy programs had any benefits denied under swampbuster (table 3). In the context of federal farm subsidies overall, swampbuster has had an insignificant effect on farmers' eligibility for farm subsidies.

Direct farm subsidy payments since 1985 could have bought all vulnerable wetlands in House Agriculture Committee districts nearly five times over. Swampbuster has two purposes: first, to create a disincentive for converting unfarmed wetlands to farming; second, to protect wetlands that are already used as farmland (including many prairie potholes, playa lakes, and incompletely drained wetlands) from further drainage that would increase the scope or effect of the original drainage. NRI data can provide estimates of both unfarmed

wetland and farmed, partially drained wetland, both of which are protected under swampbuster. In Agriculture Committee districts, we estimate that a total of 17.1 million acres were either undrained farmed wetland, incompletely drained farmed wetland, or wetland with at least some potential for conversion to agriculture (table 4).

The USDA Economic Research Service maintains state-by-state statistics on farmland values for each year fom 1950 to 1993. From these data, EWG calculated the average per-acre and total value of all vulnerable wetlands for the period 1985 to 1994 in the states represented on the House Agriculture Committee.[6] Based on state average farmland values, the total value of all vulnerable wetlands (farmed wetlands and unfarmed wetlands with any potential for conversion to cropland) in House Agriculture Committee districts was $11.7 billion.

From 1985 through 1994, USDA made direct payments of $53.6 billion to farmers in House Agriculture Committee districts, nearly 5 times the total value of all vulnerable wetland in those districts. If, as subsidy proponents have claimed, federal farm policy over the last ten years has been an investment in wetlands conservation, it has been a costly one: for the amount of money spent in farm subsidies since 1985 in these districts, the federal government could have purchased outright all of the wetlands protected by swampbuster five times over.

Federal Wetlands Policy and Property Rights

Federal farm subsidies inflate land values and can create incentives for wetlands destruction

Before the passage of swampbuster, federal farm subsidies created significant incentives for the conversion of wetlands to cropland. Between the 1950s and 1970s, nearly 400,000 acres of wetlands were converted to cropland each year, and roughly 156,000 acres of wetlands were converted to agriculture each year from the mid-1970s to the mid-1980s.[8] Until the 1985 Farm Bill, federal farm policy gave farmers strong and clear incentives to drain wetlands: the more cropland one farmed, the more subsidy one was eligible to receive. So, farmers could receive a financial reward from taxpayers for converting wetland that otherwise might not have been profitable to farm.

In theory, the swampbuster provisions of the 1985 Farm Bill ended the incentives built into federal farm law that encouraged the conversion of wetlands to farmland. Swampbuster disqualifies anyone who converts wetlands for crop production from receiving farm subsidies, including price and income supports, farm loans, and crop insurance. Estimates derived from the NRI indicate, however, that from the original passage of swampbuster in the 1985 Farm Bill through the 1992 NRI, more than 286,000 acres of wetlands were converted (i.e., drained or altered to make agricultural commodity production possible).[9] Although there is reason to believe that this wetlands loss estimate is not entirely comparable to Fish and Wildlife Service estimates for the mid-1950s through the mid-1980s, this rate of wetlands loss is significantly lower than in prior years. The extent to which the decline in wetlands drainage rates can be attributed to swampbuster is unclear.[10]

It has long been established in the economic literature that farm program payments are capitalized into land prices, artificially inflating the value of farmland. As with all land, the value of farmland is predicated on the income that it is expected to generate. For more than 60 years, the federal government has been one of the largest sources of all farm income; over the past ten years alone, direct subsidy payments to farmers and farmland owners exceeded $108 billion. For the owners of farmland, the steady, reliable flow of income from taxpayers to the farm sector, along with additional assistance after droughts and floods, has translated into what economists call a property value "windfall" of enormous proportions—roughly 15 to 20 percent of total farmland value, or $83 to $111 billion nationwide.[11] Because farmland ownership is highly concentrated—just 124,000 owners, less than 1 out of every 2000 Americans, own about half of all farmland—the bulk of this windfall accrues to just a handful of individuals.

What do the nation's taxpayers receive in return for the federal investment in farm subsidies? Since the passage of the landmark conservation title of the 1985 Farm Bill, which linked farm subsidies with resource stewardship requirements, advocates for farm subsidies have vocally and publicly justified farm programs by pointing out that they promote the conservation of soil, water, and wetland resources. To the extent that swampbuster has made enormous transfers of income from taxpayers to farmers more acceptable to the public, and that farm subsidies actually *inflate* farmland values significantly, swampbuster's effect on the value of privately owned farmland has been overwhelmingly positive.

H.R. 925 and Swampbuster. On March 3, 1995, the House of Representatives passed H.R. 925, a "Contract with America" takings bill which would require taxpayers to compensate landowners whenever a specified regulatory law lowers (or "takes") property values by 20 percent or more. H.R. 925 explicitly mentions swampbuster as a federal regulatory program for which compensation may be due. However, swampbuster is not technically a regulatory program; it is an entitlement rule. Farmers have always been free to withdraw from the federal farm programs and, within the constraints of other applicable laws, manage their wetlands as they see fit. Swampbuster simply prohibits people who convert wetlands to agriculture from receiving federal farm subsidy entitlement payments.

Given swampbuster's status as an entitlement rule, rather than a regulation, it is unclear how the reference to swampbuster in H.R. 925 should be understood. Under one interpretation of H.R. 925, swampbuster penalties would constitute a compensable "taking" because they deny federal farm subsidies to which landowners are "entitled" under law. If swampbuster penalties do constitute a taking, however, other restrictions on eligibility for farm programs, or for that matter any social welfare entitlement program, presumably could constitute a taking, too. In effect, H.R. 925 seems to establish a legal precedent that federal farm entitlement payments are the property of the recipients, not assistance conferred at the pleasure of the nation's taxpayers.

Another possible interpretation of H.R. 925 is that the owners of wetlands have a "right" to have their property values inflated by federal farm subsidies, and that swampbuster abridges

this "right" because it denies subsidies to landowners who convert wetlands to cropland. Before swampbuster, federal farm subsidies artificially inflated the value of some wetland because, if the landowner had chosen to drain and crop these areas, the federal government would have paid subsidies for the crops grown. After swampbuster, this inflationary effect was in theory eliminated: farmers who choose to drain their wetlands are no longer eligible for farm subsidies. Consequently, wetlands may be worth less as cropland simply because they aren't eligible for the steady stream of federal subsidies that other lands can receive. Evidently, the authors of H.R. 925 believe that landowners are entitled to compensation because, were it not for swampbuster, their property values would have been enhanced by eligibility for farm subsidies. If this is the correct interpretation of H.R. 925, the property right being "taken" under swampbuster would be the farmer's "right" for other taxpayers to subsidize the price of his private land.

Ironically, in many instances the 20 percent property value threshold for compensation stipulated in H.R. 925 is within the range of USDA's estimate of the amount by which federal farm subsidy programs have inflated the value of all farmland. The property value enhancement attributable to farm subsidies can be much greater than 20 percent in circumstances where production of a certain commodity is made profitable, or even economically possible, solely by virtue of federal subsidies. In some parts of Texas, for example, dryland cotton production without farm subsidies is economically impossible; with farm subsidies, it is quite lucrative. For cotton farms, the difference between the value of land used to grow cotton and the value of similar land used for cattle grazing is substantial, and is entirely due to federal farm subsidy programs.

Either interpretation of the reference to swampbuster in H.R. 925—subsidies as a property right or their enhancement of property values as a "right"—has troubling consequences. H.R. 925 makes taxpayers responsible for compensating landowners whenever swampbuster "takes" away a farmer's "rights" to a federal subsidy payment that the taxpayers themselves are obliged to provide. Following this logic, any reduction in farm program payments as a result of, say, lower target prices, could be said to be a "taking" that ought to be compensable. Under H.R. 925, the only way for taxpayers to avoid paying twice under swampbuster would be not to pay a subsidy at all. By halting all federal commodity subsidies, taxpayers would eliminate expenditures that artificially inflate land values, and would eliminate any question of whether a swampbuster "taking" occurred in the first place.

Conclusions and Recommendations

Contrary to the claims of many in the agriculture community, swampbuster has had minimal impacts on farmers' use of their land and on the flow of federal subsidies to rural landowners. Although some landowners may have found swampbuster more burdensome than others, swampbuster has denied a minuscule percentage of the $108 billion in direct farm subsidies paid over the last ten years. Nevertheless, many farm policymakers are poised to weaken the

laws that protect wetlands, and to create a new entitlement program that would make any interference with federal payments to farmers grounds for legally enforceable compensation.

If Congress elects to significantly weaken the swampbuster law without reducing payments to the farm sector overall, federal farm subsidies will once again (as they did from the 1930s through the mid-1980s) create significant incentives for farmers to drain the few remaining wetlands susceptible to conversion to cropland.Without swampbuster, the only way for taxpayers to guarantee that their money will not be used to encourage wetlands destruction is to reduce or eliminate all farm subsidies, such as price and income supports, that create incentives for wetlands destruction.

Under H.R. 925, recently passed by the House of Representatives, taxpayers would be forced to pay twice for federal farm subsidies: once for the subsidies themselves, which artificially inflate land values, and again to compensate the owners of wetlands at those inflated rates. If H.R. 925 were to be passed into law, the only way for taxpayers to avoid paying twice for federal farm subsidies would be not to pay at all, by halting all federal commodity program payments that artificially inflate farmland values.

Regatdless of whether H.R. 925 passes, a large portion of the commodity program budget should be shifted into incentives for permanent restoration and protection of farmed wetlands, previously converted wetlands, and wetlands vulnerable to conversion. Paying for permanent wetland protection would be cheaper than the existing farm subsidy system, and would prevent taxpayers from paying repeatedly, year after year, to protect the same wetlands.

Notes

[1] Prairie pothole, playa lake, and pocosin wetlands are an exception to this rule. Such areas may be considered "farmed wetlands" (partially converted, but still protected under swampbuster) if they are flooded for seven or more days during the agricultural growing season. The prairie pothole region, covering much of North and South Dakota, contains comparatively little "prior converted" (fully converted) wetlands, but a significant acreage of partially drained farmed wetlands and wetlands farmed under natural conditions.

[2] *Instructions for Collecting 1992 National Resources Inventory Sample Data*, USDA/SCS, p. 59.

[3] Uncropped areas can be deemed to have "high" potential for conversion to cropland (very likely to be converted to cropland), "medium" potential (conversion likely in the near future), "low" potential (conversion to cropland unlikely in the next 10–15 years), or "zero" potential (no likelihood of conversion). Wetland may be deemed to have"zero" potential for conversion to cropland for a variety of reasons: it may have poor soil for farming; it may be located in northern parts of the country where climate limits the growing season; it may be in remote areas, in commercial forest, or in state, county, or local ownership; or it may simply be too wet ever to be farmed profitably. For this analysis, only uncropped wetlands with anything other than "zero" potential for conversion to cropland were considered vulnerable to conversion.

NRI's estimates that land has no potential for conversion to cropland generally are accurate. In 1982, the NRI indicated that 620.6 million acres of privately owned, uncropped land had no potential to be converted to cropland. In 1992, only 0.3 percent of this land had any indication that crops had been grown in recent years.

[4] EWG's data permitted analysis only of payments made within the purview of ASCS (now the CFSA). We were (and still are) unable to ascertain if other farm program benefits—such as crop insurance indemnities or Farmers Home Administration (FmHA) loans—were withheld as a result of swampbuster or other Conservation Title violations. However, it is our understanding that neither the FmHA nor the Federal Crop Insurance Corporation (FCIC) took enforcement action against beneficiaries of their programs independent of violations reported to those agencies by ASCS. It is almost certain that at least some participants in FmHA and FCIC programs violated swampbuster or other Conservation Title rules, but were not penalized because they were not participating in ASCS/CFSA programs.

[5] Penalties comprise an even smaller portion of total taxpayer outlays associated with subsidy programs, which include (on top of the direct subsidy payments EWG has tabulated) USDA personnel, operating and overhead costs; interest charges for Commodity Credit Corporation borrowing to fund the programs; export subsidies; some commodity loan costs; and other federal farm assistance costs.

[6] For purposes of these calculations, EWG assumed that all vulnerable wetlands could be valued at the average prices of farmland in the state. These estimates of wetland land values are probably too high because in many cases farmers would have to incur additional costs for draining or filling to convert the wetlands into usable cropland. In addition, some areas of farmed wetland or converted wetland may still suffer drainage problems after conversion to cropland, and consequently produce lower than average crop yields.

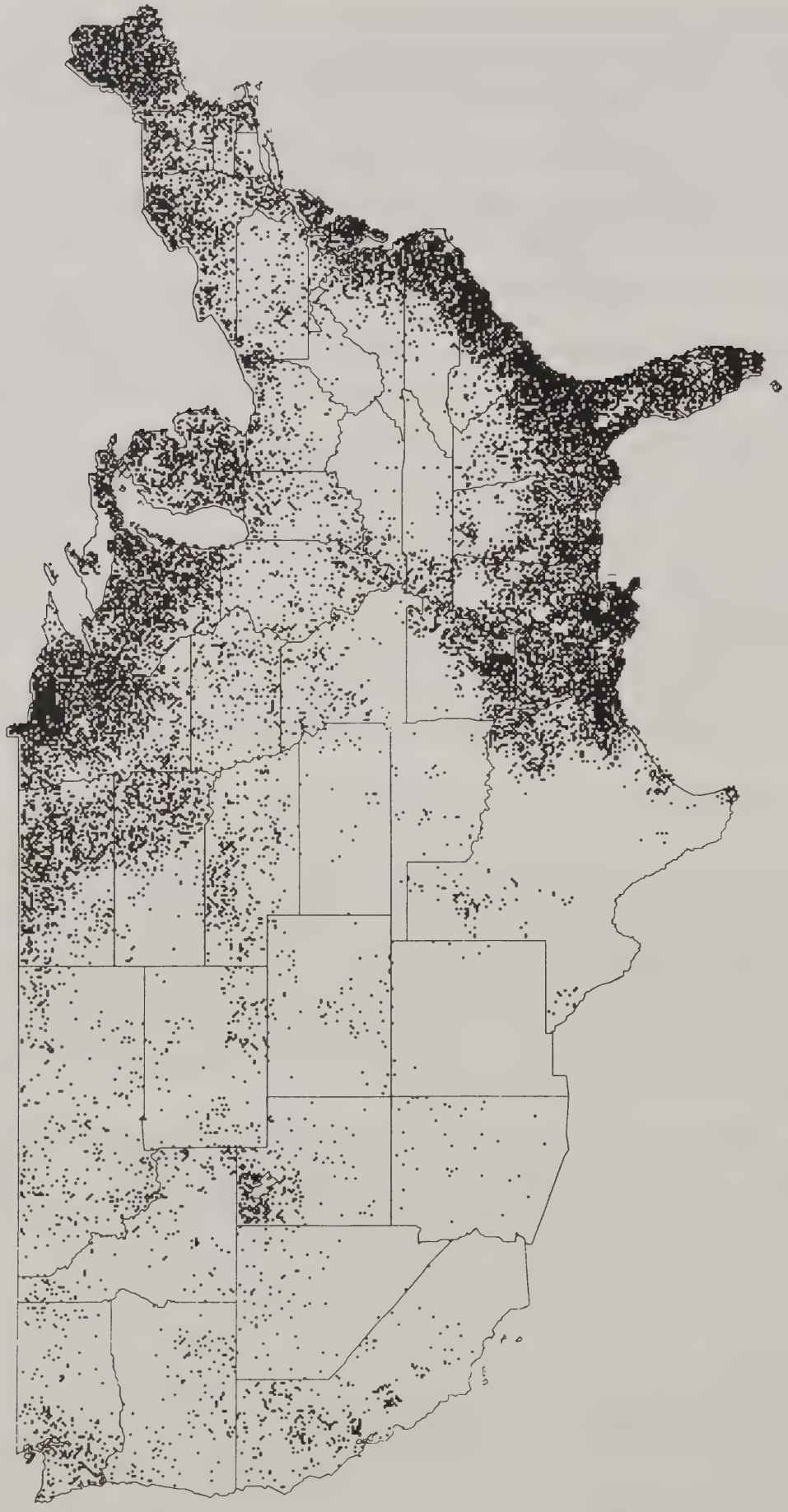
[7] See *The Impact of Federal Programs on Wetlands, Volume I: The Lower Mississippi Alluvial Plain and the Prairie Pothole Region,* U.S. Department of the Interior, October 1988.

[8] Dahl, T.E. and C.E. Johnson. 1991. *Status and Trends of Wetlands in the Conterminous United States, Mid-1970's to Mid-1980's.* U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

[9] Estimating the acreage of wetland lost since the mid-1980s has been the subject of considerable controversy in recent months. Estimates derived from the 1992 NRI indicate that at least 286,000 acres of wetland were converted to agriculture between the passage of swampbuster and the time of the inventory. Based on a slightly different definition of wetland also maintained in NRI data, 1.3 million acres of wetlands were lost to nonwetland between 1982 and 1992, while wetlands gains were approximately 650,000 acres over the same period. These numbers obscure the fact that the majority of wetlands lost over this period (1,030,400 acres, or 79 percent) were forested or had scrub-shrub or emergent vegetation, while the vast majority of wetlands gained had no such vegetation. Most arguments over wetland *acreage* losses ignore losses in wetland functions and values, and further investigation by NRCS and the U.S. Fish and Wildlife Service will be needed to assess wetland *functional* losses over the past ten years.

[10] Evidence indicates that one significant reason for the decline in wetland losses is simply that in many heavily agricultural and heavily urbanized areas, the vast majority of wetlands susceptible to conversion have already been lost. Additional reasons may include changes to the tax code in 1986 that eliminated tax deductions for wetlands drainage expenditures, and the elimination of various direct USDA subsidies for drainage practices.

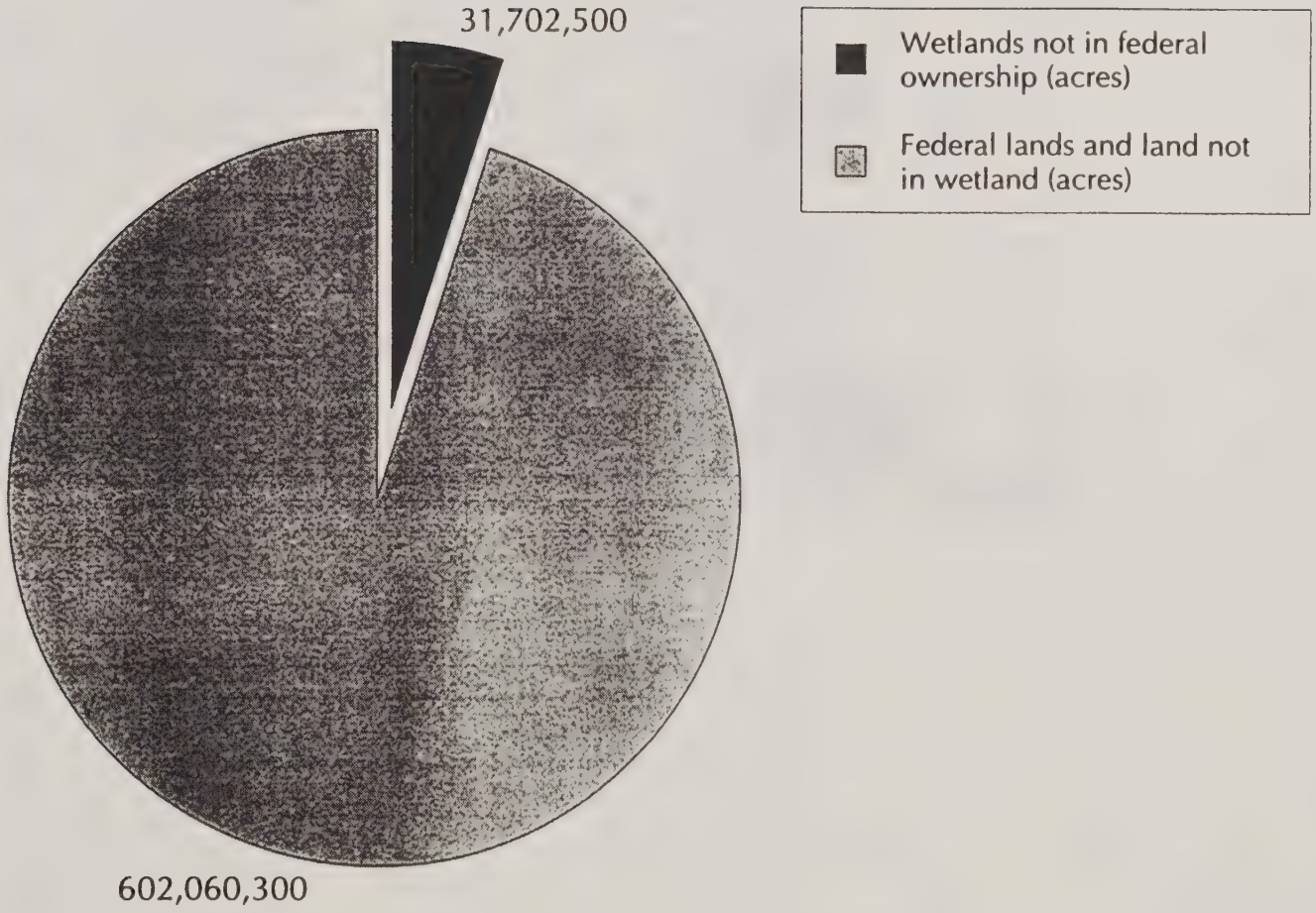
[11] See "Faking Takings," Environmental Working Group, March 1994.



One dot • = 3,000 acres of wetland.

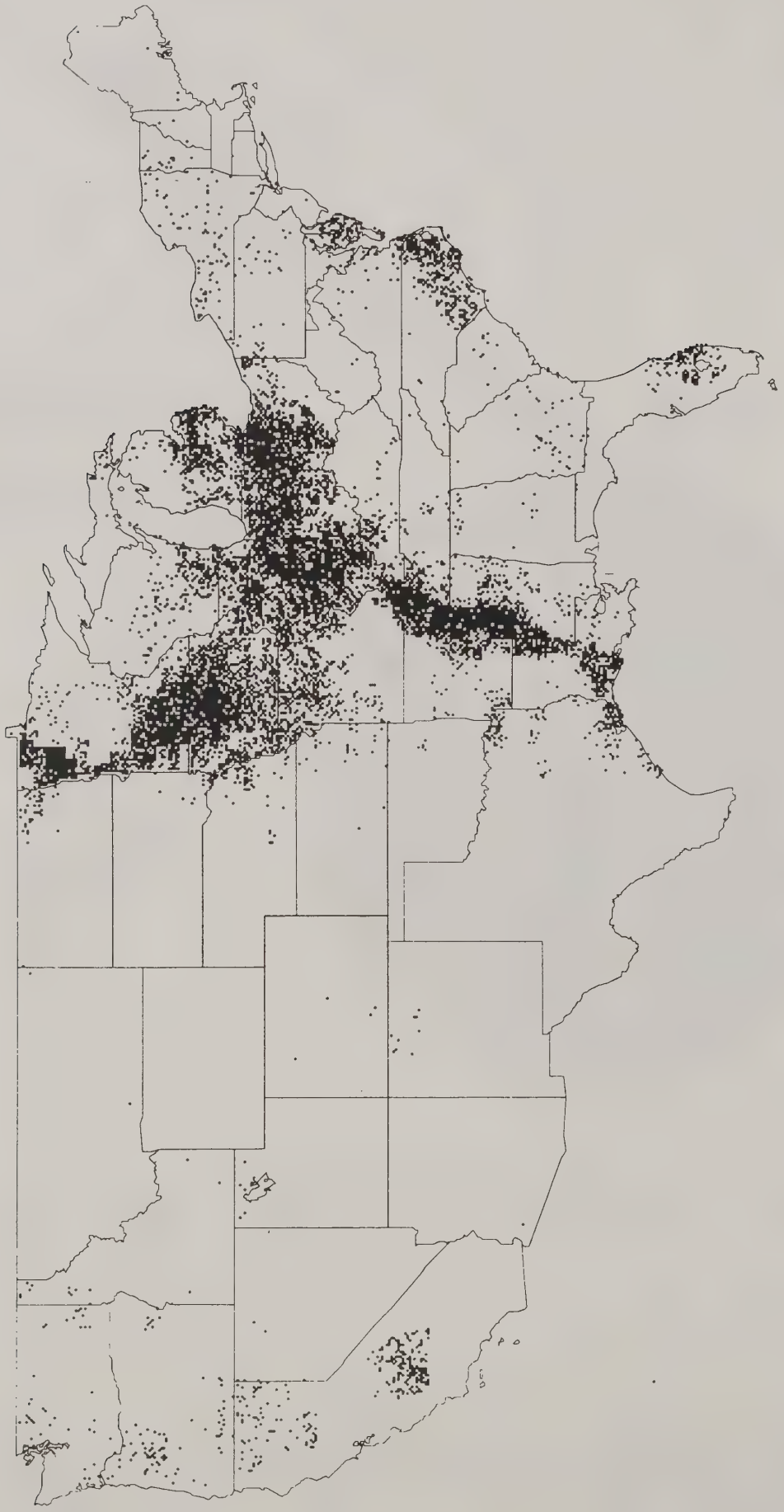
Source: Environmental Working Group. Compiled from USDA data.

FIGURE 1 There are 87.7 million acres of wetlands on nonfederal lands outside Alaska.



Source: Environmental Working Group. Compiled from USDA data.

FIGURE 2 In House Agriculture Committee districts, approximately five percent of all land is nonfederal wetland.



One dot • = 3,000 acres of converted wetland.

Source: Environmental Working Group. Compiled from USDA data.

FIGURE 3 More than 52.6 million acres of wetland were converted to agriculture before 1985.

TABLE 1 In 14 Agriculture Committee districts, there are more wetlands that were completely converted to cropland before 1985 than there are undrained wetlands remaining.

District	Representative	Remaining undrained wetland (acres)	Wetlands converted to cropland before 1985 (acres)	Acres of remaining wetland per 1000 acres of converted wetland
MO08	Bill Emerson (R)	37,000	1,574,900	23
IL15	Thomas W. Ewing (R)*	51,400	2,129,200	24
IA05	Tom Latham (R)	194,900	3,300,400	59
IL18	Ray LaHood (R)*	81,300	1,206,800	67
OH08	John Boehner (R)*	33,800	446,300	76
CA20	Calvin Dooley (D)*	67,600	653,800	103
IN08	John Hostettler (R)*	70,700	470,300	150
MN02	David Minge (D)*	602,400	3,479,300	173
KY02	Ron Lewis (R)*	16,000	66,000	242
MO09	Harold L. Volkmer (D)*	176,500	527,400	335
MS02	Benny Thompson (D)*	850,100	2,491,700	341
KY06	Scotty Baesler (D)*	2,100	5,100	412
CA18	Gary Condit (D)*	136,400	307,200	444
MN07	Collin C. Peterson (D)*	3,159,400	3,178,500	994

** Congressional district has one or more counties not contained within the district. For this tabulation, such "partial counties" are treated as if they were contained entirely within the district.*

Source: Environmental Working Group. Compiled from USDA data.

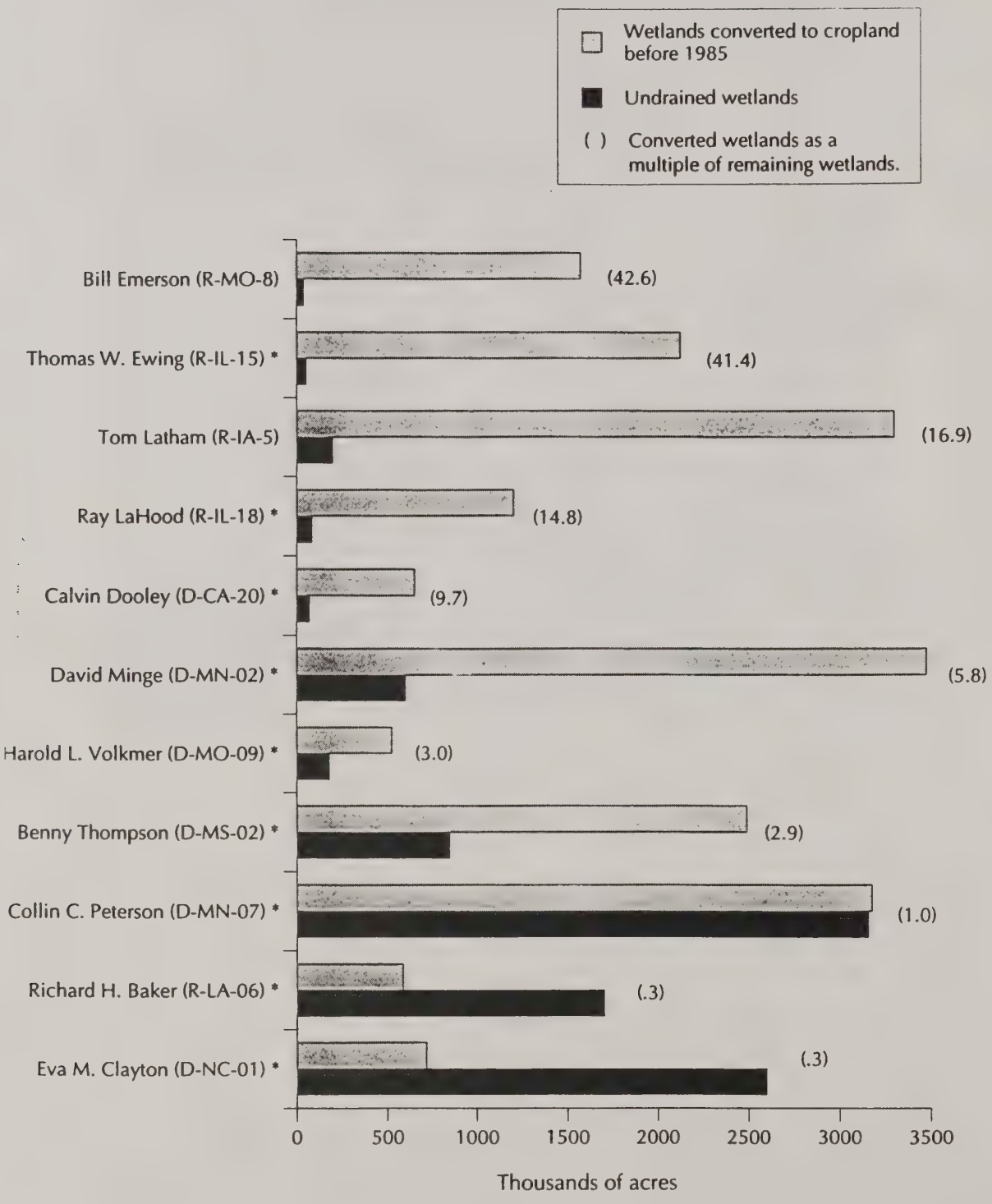


FIGURE 4 Eleven House Agriculture Committee districts had more than a half million acres of converted wetlands.

* *Congressional district has one or more counties not contained within the district. For this tabulation, such "partial counties" are treated as if they were contained entirely within the district.*

Source: Environmental Working Group. Compiled from USDA data.

TABLE 2 Between 1987 and 1992, Swampbuster penalties in Agriculture Committee districts totaled just over one one-hundredth of one percent of direct farm subsidy payments.

House District	Representative	Total Swampbuster penalties, 1987–1992	Total of USDA subsidies, 1987–1992 ($1,000s)	Swampbuster penalties as a percentage (%) of farm subsidies
AL02	Terry Everett (R) *	$ 4,169	$ 162,826	0.003%
AL07	Earl Hillard (D) *	0	126,462	0
AZ02	Ed Pastor (D) *	0	351,618	0
CA04	John T. Doolittle (R) *	0	76,164	0
CA11	Richard W. Pombo (R) *	0	104,906	0
CA17	Sam Farr (D) *	0	25,696	0
CA18	Gary Condit (D) *	0	488,625	0
CA20	Calvin Dooley (D) *	0	762,532	0
CA42	George E. Brown (D) *	0	27,067	0
CA43	Ken Calvert (R) *	0	40,455	0
CO04	Wayne Allard (R) *	0	1,277,127	0
FL05	Karen L. Thurman (D) *	0	31,387	0
FL12	Charles T. Canady (R) *	7,689	33,111	0.023
FL16	Mark Foley (R) *	7,689	11,767	0.065
GA02	Sanford D. Bishop (D) *	0	455,333	0
GA08	Saxby Chambliss (R) *	0	363,492	0
GA11	Cynthia A. McKinney (D) *	0	124,224	0
IA05	Tom Latham (R)	66,078	2,284,426	0.003
ID01	Helen Chenoweth (R) *	0	269,135	0
ID02	Michael D. Crapo (R) *	21,314	642,307	0.003
IL15	Thomas W. Ewing (R) *	34,166	1,047,207	0.003
IL18	Ray LaHood (R) *	18,499	836,500	0.002
IN08	John Hostettler (R) *	14,369	271,056	0.005
KS01	Pat Roberts (R) *	6,957	3,634,483	0.0002
KY02	Ron Lewis (R) *	0	155,439	0
KY06	Scotty Baesler (D) *	0	39,198	0
LA06	Richard H. Baker (R) *	160,723	250,232	0.064
ME02	John Baldacci (D) *	365	26,779	0.001
MI07	Nick Smith (R) *	4,393	328,939	0.001
MN02	David Minge (D) *	885,243	1,627,700	0.054
MN07	Collin C. Peterson (D) *	1,023,262	1,363,057	0.075
MO08	Bill Emerson (R)	10,000	488,088	0.002
MO09	Harold L. Volkmer (D) *	37,585	518,834	0.007
MS02	Benny Thompson (D) *	280,408	1,139,005	0.025
NC01	Eva M. Clayton (D) *	0	130,129	0
NC07	Charles Rose (D) *	0	301,100	0
ND01	Earl Pomeroy (D)	980,939	3,404,865	0.029
NE03	Bill Barrett (R) *	38,312	3,207,377	0.001
OH08	John Boehner (R) *	16,234	209,003	0.008
OK06	Frank Lucas (R) *	0	1,205,603	0
OR02	Wes F. Cooley (R) *	0	458,345	0
PA06	Tim Holden (D) *	0	39,432	0
SD01	Tim Johnson (D)	514,209	2,209,145	0.023
TN07	Ed Bryant (R) *	0	154,655	0
TX15	E. (Kika) de la Garza (D) *	0	340,101	0
TX17	Charles W. Stenholm (D) *	0	891,923	0
TX19	Larry Combest (R) *	0	1,666,247	0
VA06	Robert Goodlatte (R) *	0	19,048	0
WI03	Steve Gunderson (R) *	105,650	550,387	0.019
All House Agriculture Committee		$4,238,253	$34,172,537	0.012%

** Congressional district has one or more counties not contained within the district. For this tabulation, such "partial counties" are treated as if they were contained entirely within the district.*

Source: Environmental Working Group. Compiled from USDA data.

TABLE 3 In Agriculture Committee districts, only 3 producers in 10,000 received any swampbuster penalty from 1987 to 1992.

House District	Representative	Total producers denied benefits, 1987–1992	Average number of producers receiving subsidies each year, 1987–1992	Swampbuster violators as a percentage (%) of all recipients
AL02	Terry Everett (R) *	1	6,536	0.015%
AL07	Earl Hillard (D) *	0	3,070	0
AZ02	Ed Pastor (D) *	0	1,448	0
CA04	John T. Doolittle (R) *	0	959	0
CA11	Richard W. Pombo (R) *	0	1,191	0
CA17	Sam Farr (D) *	0	572	0
CA18	Gary Condit (D) *	0	3,945	0
CA20	Calvin Dooley (D) *	0	5,201	0
CA42	George E. Brown (D) *	0	86	0
CA43	Ken Calvert (R) *	0	191	0
CO04	Wayne Allard (R) *	0	19,990	0
FL05	Karen L. Thurman (D) *	0	1,060	0
FL12	Charles T. Canady (R) *	2	735	0.272
FL16	Mark Foley (R) *	2	195	1.026
GA02	Sanford D. Bishop (D) *	0	7,910	0
GA08	Saxby Chambliss (R) *	0	9,362	0
GA11	Cynthia A. McKinney (D) *	0	3,708	0
IA05	Tom Latham (R)	6	53,523	0.011
ID01	Helen Chenoweth (R) *	? 3	6,243	0.048
ID02	Michael D. Crapo (R) *	? 0	9,457	0
IL15	Thomas W. Ewing (R) *	5	30,989	0.016
IL18	Ray LaHood (R) *	3	24,467	0.012
IN08	John Hostettler (R) *	2	9,060	0.022
KS01	Pat Roberts (R) *	3	95,687	0.003
KY02	Ron Lewis (R) *	0	9,506	0
KY06	Scotty Baesler (D) *	0	3,353	0
LA06	Richard H. Baker (R) *	3	5,411	0.055
ME02	John Baldacci (D) *	1	1,382	0.072
MI07	Nick Smith (R) *	1	8,125	0.012
MN02	David Minge (D) *	61	35,849	0.170
MN07	Collin C. Peterson (D) *	54	26,765	0.202
MO08	Bill Emerson (R)	2	17,844	0.011
MO09	Harold L. Volkmer (D) *	5	13,504	0.037
MS02	Benny Thompson (D) *	2	11,299	0.018
NC01	Eva M. Clayton (D) *	0	3,807	0
NC07	Charles Rose (D) *	0	14,192	0
ND01	Earl Pomeroy (D)	34	62,516	0.054
NE03	Bill Barrett (R) *	4	59,713	0.007
OH08	John Boehner (R) *	3	8,046	0.037
OK06	Frank Lucas (R) *	0	34,340	0
OR02	Wes F. Cooley (R) *	0	6,666	0
PA06	Tim Holden (D) *	0	1,453	0
SD01	Tim Johnson (D)	46	53,903	0.085
TN07	Ed Bryant (R) *	0	7,619	0
TX15	E. (Kika) de la Garza (D) *	0	7,361	0
TX17	Charles W. Stenholm (D) *	0	20,543	0
TX19	Larry Combest (R) *	0	21,270	0
VA06	Robert Goodlatte (R) *	0	1,625	0
WI03	Steve Gunderson (R) *	13	19,395	0.067
All House Agriculture Committee		256	751,072	0.034%

** Congressional district has one or more counties not contained within the district. For this tabulation, such "partial counties" are treated as if they were contained entirely within the district.*

Source: Environmental Working Group. Compiled from USDA data.

TABLE 4 Ten years of farm subsidy payments (1985–1994) could have purchased *all* vulnerable wetlands in House Agriculture Committee districts nearly five times over.

House District	Representative	Wetland acres in cropland or with potential for conversion to cropland	Estimated average value per acre of farmland	Estimated total value of wetlands ($1,000s)	Total of direct USDA subsidies, 1985–1994 ($1,000s)	Number of times all vulnerable wetlands could have been purchased with USDA subsidies
AL02	Terry Everett (R) *	244,300	$ 591	$ 144,381	$ 238,941	1.7
AL07	Earl Hillard (D) *	367,900	591	217,949	178,719	0.8
AZ02	Ed Pastor (D) *	1,400	260	364	669,502	1839.3
CA04	John T. Doolittle (R) *	42,400	1,427	60,505	126,355	2.1
CA11	Richard W. Pombo (R) *	18,400	1,427	26,257	170,508	6.5
CA17	Sam Farr (D) *	N/A†	1,427	N/A†	33,955	N/A†
CA18	Gary Condit (D) *	116,500	1,427	166,246	803,579	4.8
CA20	Calvin Dooley (D) *	88,400	1,427	126,147	1,273,206	10.1
CA42	George E. Brown (D) *	N/A†	1,427	N/A†	53,982	N/A†
CA43	Ken Calvert (R) *	N/A†	1,427	N/A†	72,649	N/A†
CO04	Wayne Allard (R) *	46,800	313	14,648	1,892,132	129.2
FL05	Karen L. Thurman (D) *	280,700	1,635	458,945	52,699	0.1
FL12	Charles T. Canady (R) *	300,400	1,635	491,154	51,897	0.1
FL16	Mark Foley (R) *	324,400	1,635	530,394	30,341	0.1
GA02	Sanford D. Bishop (D) *	504,600	696	351,202	701,646	2.0
GA08	Saxby Chambliss (R) *	814,300	696	566,753	554,627	1.0
GA11	Cynthia A. McKinney (D) *	345,800	696	240,677	196,040	0.8
IA05	Tom Latham (R)	257,800	889	229,184	3,675,023	16.0
ID01	Helen Chenoweth (R) *	143,100	521	74,555	452,674	6.1
ID02	Michael D. Crapo (R) *	269,500	521	140,410	1,038,122	7.4
IL15	Thomas W. Ewing (R) *	47,500	1,185	56,288	1,559,960	27.7
IL18	Ray LaHood (R) *	70,700	1,185	83,780	1,246,742	14.9
IN08	John Hostettler (R) *	55,800	972	54,238	410,722	7.6
KS01	Pat Roberts (R) *	35,300	385	13,591	5,550,138	408.4
KY02	Ron Lewis (R) *	13,900	658	9,146	222,167	24.3
KY06	Scotty Baesler (D) *	2,500	658	1,645	54,027	32.8
LA06	Richard H. Baker (R) *	1,194,200	833	994,769	415,010	0.4
ME02	John Baldacci (D) *	337,900	675	228,083	58,123	0.3
MI07	Nick Smith (R) *	301,900	736	222,198	479,245	2.2
MN02	David Minge (D) *	510,800	606	309,545	2,691,670	8.7
MN07	Collin C. Peterson (D) *	1,580,100	606	957,541	2,202,133	2.3
MO08	Bill Emerson (R)	54,100	521	28,186	839,891	29.8
MO09	Harold L. Volkmer (D) *	141,200	521	73,565	712,890	9.7
MS02	Benny Thompson (D) *	683,200	586	400,355	1,928,826	4.8
NC01	Eva M. Clayton (D) *	1,639,900	941	1,543,146	483,608	0.3
NC07	Charles Rose (D) *	1,004,400	941	945,140	105,557	0.1
ND01	Earl Pomeroy (D)	2,120,700	302	640,451	5,381,553	8.4
NE03	Bill Barrett (R) *	765,500	439	336,055	5,023,450	14.9
OH08	John Boehner (R) *	30,900	892	27,563	303,760	11.0
OK06	Frank Lucas (R) *	41,600	411	17,098	1,902,098	111.2
OR02	Wes F. Cooley (R) *	414,100	428	177,235	676,286	3.8
PA06	Tim Holden (D) *	34,100	1,115	38,022	57,837	1.5
SD01	Tim Johnson (D)	1,303,900	259	337,710	3,442,763	10.2
TN07	Ed Bryant (R) *	124,700	701	87,415	231,836	2.7
TX15	E. (Kika) de la Garza (D) *	30,800	456	14,405	531,187	37.8
TX17	Charles W. Stenholm (D) *	1,400	456	638	1,431,066	2241.6
TX19	Larry Combest (R) *	17,800	456	8,117	2,579,001	317.7
VA06	Robert Goodlatte (R) *	12,100	902	10,914	28,231	2.6
WI03	Steve Gunderson (R) *	379,600	538	204,225	800,730	3.9
All House Agriculture Committee		17,117,300	$ 681	$11,659,949	$53,617,104	4.6

† *N/A = Not available. Wetlands acreage too low to be detected through NRI.*

* *Congressional district has one or more counties not contained within the district. For this tabulation, such "partial counties" are treated as if they were contained entirely within the district.*

Source: Environmental Working Group. Compiled from USDA data.

Environmental Justice

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Introduction

The most basic "Quality of Life" issue confronting this nation's poor and minorities is the right to breathe clean air, drink fresh water, and live and work on uncontaminated soils. During previous trips to the "bargaining table of rights," critics have challenged the right to jobs at a living wage, the right to a quality education, and the right to live somewhere other than in a group shelter or worse. Much of the resistance to these rights has drawn support from the contention that these are privileges that must be earned. Another prevailing opinion is that there is no money to underwrite the related costs of meeting these needs. However, the right to clean air, water, and soil is not a privilege, and the broader society can no longer shirk its responsibility to do whatever is necessary to meet these basic expectations.

The facts are: 1) 3 out of 5 African-Americans and Hispanics live within the reaches of contaminated toxic waste facilities, 2) over 300,000 farm workers (mostly Hispanics) are being exposed to pesticide poisoning, 3) hundreds of thousands of children are being poisoned by lead-based products, and 4) 17,000 Navajo youth are suffering from uranium radiation poisoning. These documented facts provide ample evidence to support the legitimacy of redress.

The name associated with this redress is *Environmental Justice*. Environmental Justice began as a grass-roots movement organized to bring the environmental inequities of poor and minority communities into the light of public scrutiny by means and methods traditionally used to address other civil rights issues.

As a direct result of President Clinton's issuance of Executive Order 12898 on Environmental Justice on February 11, 1994, Federal agencies have gathered baseline information and identified options needed to rectify environmental failings. Environmental Justice has both industrial and agricultural implications. The United States Department of Agriculture's (USDA's) Natural Resource Conservation Service (NRCS) has as their charge the responsibility to assist in the efficient and effective management of natural resources. Important questions have to be asked and answers found before planning can begin.

What is environmental justice? What are the major issues of environmental justice? Who are the major players? How does natural resource management link with the problems identified by the Environmental Justice Movement? To what extent does NRCS need to form partnerships? And with whom? When and where can NRCS provide environmental justice leadership?

This framework analysis is divided into two sections. The first section describes the implementation strategy recommended by the Executive Order; reviews the environmental justice terminology, history, and time-line; and concludes with a discussion of the Movement's major players. The second section considers the role of conservation agencies and possible response modalities, and provides projections on the status of the environmental justice and natural resource movement for both 10- and 50-year periods. Environmental equity is the wake-up call by the disenfranchised on their own behalf and on the behalf of this country's natural resources.

PART I

Environmental Justice Terminology

Based on the framework one utilizes to organize reality, environmental justice has distinct interpretations which reflect historically entrenched attitudes involving control, powerlessness, and conflict.

Government

Environmental justice, as defined by President Clinton's 1994 Executive Order 12898, refers to the broad range of environmental issues arising from inequities experienced by poor and minority communities.

> The main thrust of the initiative is to focus attention of Federal agencies on the human health and environmental conditions in minority communities and low-income communities with the goal of achieving environmental justice and to foster nondiscrimination in Federal programs. (USDA, 1995)

To coordinate agency planning and programming, the Executive Order called for the creation of an interdepartmental taskforce. The Federal Environmental Task Force developed guidelines to establish overriding program priorities to prevent future environ-mental justice catastrophes and to minimize the negative effects of past initiatives. Individual federal agencies have been directed to consider specific environmental justice deficiencies in ongoing programs and to apply this same scrutiny in all future planning.

USDA's Environmental Justice Strategy is divided into the following three broad categories: Organization and Policy, Resources, and Implementation Methodologies. Included in Implementation Methodologies are seven major program priorities. Each provides a variety of implications for the way business is to be conducted.

- Education of farmers about the use of pesticides and fertilizers in crop production and their effect on human health and water quality
- Location and management of federal research facilities, grain storage sites, inventory lands, hazardous waste sites, and underground storage tanks
- Administration of technical assistance and loan and grant programs to socially disadvantaged customers

- Provision of food programs and nutrition education for pregnant women, children, and families in low-income communities
- Nutrition research on the needs and food intake of diverse ethnic populations
- Delivery of Extension education programs in Spanish and other languages
- Collection of statistics and demographics of minority farmers and minority-owned farming operations, including American Indian farmers and ranchers

(USDA, 1995)

Given the fiscal climate in the 104th Congress and the lack of formal Federal legislation, the ability to programmatically sustain the long-term goals of environmental justice may be compromised.

Disenfranchised

Environmental justice as experienced by the disenfranchised, however, has a very different meaning. Reverend Benjamin F. Chavis, Jr., Director of the United Church of Christ Commission on Racial Justice in 1982, reinterpreted environmental justice as environmental racism. He cites environmental racism as "racism in environmental policymaking [sic]. It is racial discrimination in the enforcement of regulations and laws. It is racial discrimination in the deliberate targeting of communities of color for toxic waste disposal and the siting of polluting industries. It is racial discrimination in the official sanctioning of the life-threatening presence of poisons and pollutants in communities of color" (Bullard, 1993).

Numerous studies and reports dating back to the early 1970s document examples of the historic inequities of the disproportional location of toxic waste sites and the resulting health and economic consequences of these actions. Environmental racism strikes at quality of life issues for minority communities regardless of socioeconomic status. Powerful and tragic examples can be documented for African-American, Native American, Asian/Pacific Islander American and Hispanic communities (see Appendix A). In each instance, it has been members from each community who have organized into local grassroots groups, most often led by women, (see Appendix B) to bring to the attention of policymakers and mainstream environmental organizations the disastrous results of these environmental degradations.

Three terms are interchangeably used in discussions of the movement. They are environmental justice, environmental equity, and environmental racism. Given understandings of environmental justice and environmental racism, the remaining term, environmental equity, is defined as the goal of environmental justice while its absence is the justification for environmental racism. The three measures for environmental equity are

Procedural Equity, which refers to the "fairness" question: the extent to which governing rules and regulations, evaluation criteria, and enforcement are applied in a nondiscriminatory manner;

Geographical Equity, which refers to the location and spatial configuration of communities and their proximity to environmental hazards, noxious facilities, and locally unwanted land uses (LULUs); and

> *Social Equity,* which assesses the role of sociological factors (race, ethnicity, class, culture, life-styles, political power, and similar factors) in environmental decision making. (Bullard, 1994)

The parameters posed by the combination of these equity measures should be used as the basis by decision-makers for examining the justice factor in any environmental decision. In sum, environmental justice minus environmental equity equals environmental racism (EJ – EE = ER).

Mainstream Environmental Organizations

Three societal segments form the counterbalance to the pollution-for-profit industries. They are the government, grassroots organizations, and the mainstream environmental groups. Brief discussions have previously addressed the role and relationship of the EPA as the major environmental regulating agency and the projected participation of other government bodies as a result of the 1994 Executive Order. References have also been made to several of the long-standing grassroots organizations and the constituent bases they serve. The remaining member of this triad comprises the major mainstream environmental organiza-tions, more commonly referred to as the "Group of 10" (see Appendix C).

The historic environmental justice positioning of the mainstream environmental organizations has been questionable at best. The environmental movement dates itself to 1970 (Earth Day). Drawing upon the energies of activism generated by the civil rights and anti-war efforts, movement membership mainly composed of white upper and middle class individuals came together out of a sense of personal responsibility for the protection and preservation of this planet's natural resources. In 1978, the Sierra Club co-sponsored a conference with the Urban League in Detroit. Over 700 people of color and members of other environmental groups met to address the merging of environmental and civil rights agendas. It has been suggested that the onset of the Reagan/Bush era necessitated a survival retrenchment that negated building upon these alliances (Sierra, 1993).

In January, 1990, led by Richard Moore, head of the Southwest Organization Project, in conjunction with the Southern Organizing Committee for Economic and Racial Justice, the Commission for Racial Justice and the Gulf Coast Tenants Association formally notified the "Group of 10" of their collective displeasure with "racism and elitism" within the traditional environmental movement (Sierra, 1993). What has now become known as "The Letter" was co-signed by over 100 other grass-roots organizations.

The essence of their message was 1) stop accepting money from the industries that are responsible for killing our people, 2) diversify the professional staffing of your organizations and the composition of your boards, and 3) become clear as to who or what is the real target of their advocacy operations (Sierra, 1993).

Recognizing the legitimacy of criticisms leveled by environmental justice activists, the leadership of several from the "Group of 10" acknowledged their need to expand and to

commit organizational resources "to protect the earth and *its human inhabitants* [emphasis added] from environmental degradation" (Adams, 1992).

Timeline

There are two principal components to consider in any discussion of an environmental justice timeline. They are 1) the identification of impacted communities that have organized in response to local environmental threats and 2) a chronology of research reports and studies that have been received by the general public as offering significant and pertinent information. Together, they reveal the 25-year-long road already traveled by the Environ-mental Justice Movement.

The generally accepted beginning of the Environmental Justice Movement is most often associated with the National Association for the Advancement of Colored People's (NAACP) organized protest of the siting of a polychlorinated biphenyl (PBC) waste facility in Warren County, North Carolina. The arrest of 500 demonstrators, in 1982, brought national attention to the grievances of that small African-American community. Most notably, it opened the door to recognizing the prospect that similar problems existed in other communities of color throughout the country.

Even though the Montgomery Bus Boycott is cited as the official beginning of the Civil Rights Movement, history shows that the civil rights struggle had many years of trials prior to 1955. This is also true for the Environmental Justice Movement. For example, during the early 1970s, residents of the Gullah Islands located off South Carolina coast successfully organized to fend off a German processing facility that they believed would destroy the balance of their ecosystem (Reilly, 1992). Soon after, Mothers from East Los Angeles (MELA) came together to protest the local placement of a 1400-bed medium-security facility. MELA has continued their struggle for the past 25 years (Steinhart, 1985; Pardo, 1991). Late in the 1970s, members of the Ojibwa Nation in White Earth, Minnesota, organized to challenge the siting of an army base and the construction of a series of water diversion projects (Sierra, 1993).

Dr. Robert Bullard began the formal documentation of environmental justice in the 1970s with his study of Houston, Texas. His study revealed the downside of metropolitan Houston's unplanned and unrestricted industrial development and the high price paid by the residents of its African-American communities. In 1979, he completed the first major empirical study linking municipal solid waste sitings with the race of surrounding residents. The study, titled "Invisible Houston: The Black Experience in Boom or Bust," found that three out of four privately owned landfills were in African-American neighborhoods, even though this group represents only 28 percent of Houston's population.

As a result of the Warren County (North Carolina) demonstration, Congressional Representative Walter Fauntroy (D–DC) asked the General Accounting Office (GAO) to conduct a study on natural toxic waste siting. In 1983, the report concluded that of the eight major U.S. facilities, four were located in EPA Region VI and that three of those four were in African-American communities. Five years later, the United Church of Christ's Commission

on Racial Justice in "Toxic Wastes and Race" reported, by using zip-coded information, that the single most significant factor associated with hazardous facility location was the variable of race.

Greenpeace first documented, in 1988, the resultant health consequences of living in proximity to potential toxics-producing industries, with its study of Louisiana residents living along the Mississippi in an area known as "Cancer Alley."

Cancer Alley, the home of the nation's largest assemblage of petrochemical companies, is located on the 75-mile stretch between Baton Rouge and New Orleans. The town of Geismar in St. John's Parish has 18 industrial plants in a 5-mile stretch. It was noted that within St. John's Parish ". . . [t]he cancer death rate for men was rising 71 percent faster than elsewhere in the country. . . the women's rate was increasing 50 percent more quickly" (Carroll, 1991).

Louisiana ranks 20th in population, yet is ". . . 1st in toxic surface-water discharges, 2nd in underground injection, 2nd in discharge of carcinogens, 2nd in hazardous waste importation and 4th in toxic air discharges" (Carroll, 1991).

The early 1990s saw two major reports. In 1992, a multi-racial, 30-person task force from the Environmental Protection Agency (EPA) indicated in "Reducing Risk: Setting Priorities and Strategies for Environmental Protection" that their research contradicted the findings of the Commission on Racial Justice (1987), concluding that economic status was more significant than race in predicting facility location. The sixth document is a report from the *National Law Journal*. In 1993, its results revealed discrepancies in enforcement of regulations by EPA. The report indicated that it took 20 percent longer to identify Superfund sites located in minority areas, and once investigated, these facilities were fined half as much as in majority communities.

The following list is a chronological summary of the previously discussed research.

SOURCE	YEAR	FINDING
Bullard	1979	Location
GAO	1983	Location
Commission on Racial Justice	1987	Race
Greenpeace	1988	Health
EPA	1992	Poverty
National Law Journal	1993	Enforcement

PART II

Role of Conservation Agencies

The U.S. Department of Agriculture's Resources Conservation Act of 1977 was enacted to further "the conservation, protection and enhancement of the nation's soil, water and related resources for sustained use and other purposes." Since 1977, each succeeding Farm Bill has continued to reiterate and broaden the definition and the responsibilities of the government's role in resource management.

Historically, the primary consumer audience for conservation services and assistance has been the agricultural production community. Economic incentives provided through commodity, operational, and disaster loan programs have fostered producer participation. The most recent farm bill, however, is attempting to modify this old relationship. Along with the shifting of available funding, there has been an expansion of the definition of impacted resources (soil, water, air, plants, and animals) and a broadening of the potential client base (rural, urban, and suburban).

The Department of Agriculture's conservation agencies should be the most logical source of resource expertise for the Environmental Justice Movement. They should be sought out by local communities and grassroots organizations to provide the technical information needed to understand and to maintain the integrity of their endangered resources (self included).

Is the environmental justice movement aware of the technical expertise available through the conservation agencies? Do the conservation agencies have a relationship with the movement's communities? Is there a history to support the movement's grass-roots participants' trust of these government agencies? Have the conservation agencies broadened the skill base of their personnel to match this expanded responsibility? The most accurate answer to all of these questions is no.

This is a time of transition. Change will be difficult for everyone. Conservation agencies are being called upon to do more with less. The more will only come about 1) when traditional users, of economic means, utilize private sources for resource management assistance, and 2) when conservation agencies have prepared themselves with appropriate programs and personnel. Conservation agencies are supported by federal dollars. In the same way that EPA has faced legal challenges on the basis of Title VI of the 1965 Civil Rights Act for compromised program delivery, so will conservation agencies, once environmental justice organizations understand the connection.

Modalities

The USDA's Environmental Justice Strategy is divided into three broad areas: organization and policy, resources and implementation methodologies. Three of the seven

proposed program priorities under the category of methodologies offer excellent starting points for conservation agencies in their bid to connect. They are:

the *education* of farmers about the use of pesticides and fertilizers in crop production and their effect on human health and water quality;

the *administration of technical assistance and loan and grant programs* to socially disadvantaged customers, and

the *collection of statistics and demographics* of minority farmers and minority-owned farming operations, including American Indian farmers and ranchers.

It is important to note that these are but starting points. The clientele focus of these methodologies is still traditional rural. However, demonstrated success in meeting the needs of rural minorities and other socially and economically disadvantaged rural residents will go a long way in establishing the credibility needed to assist their urban counterparts.

Currently, conservation agencies are involved in coordinating locally led conservation groups. This process provides an excellent model to bring together environmental justice stakeholders. Conservation agencies can use this opportunity to link other governmental partners (state, county and local) and academe with grass-roots environmental justice organizations.

The environmental justice stakeholders are advocates of their personal survival and the mainstream environmentalists are resource advocates. Federal conservation agencies can use their knowledge and skills of resource management to convene a forum to complete the circle.

Projections

Ten-Year

Given the current economic, social and political realities, the following is a list of possible projections which may occur over the next 10 years. These are organized under the five categories of legislation, health care, re-migration, leadership, and sacrifice to toxics.

Legislation

Federal legislation will be passed to establish national accountability but the funding and the oversight will be carried out within states.

Health Care

The missing links between environmental degradation and health problems will be made and the financial responsibility to address those concerns will be borne by the offending entity. There will be an expansion of the role of public health personnel in documenting community health concerns and legitimizing those findings in formal proceedings.

Re-Migration

There will continue to be massive movement in the population. African-Americans will continue to return to the Southeast, the white middle class will return to the urban centers, and American Indians will return to homelands.

Both the African-Americans and the white middle class will become vocal in their expectations of environmental clean-ups and reparations and exert the necessary political and economic power. American Indians will maximize emerging economic independence from gambling to move beyond the economic bribery currently used by waste management systems and, combined with their returning residents, bring pressure of their own to bear on polluters.

Leadership

Conservation agencies will serve as the portal to partnerships. This will be highly dependent upon these agencies' continuing to develop in-house expertise to meet the wide range of resource management needs.
Grassroots organizations will continue to grow in their abilities to bring their constituencies together and to apply legal leverage.

Sacrifice to Toxics

Unless there is some significant scientific breakthrough, the inability to handle and break down hazardous waste materials will result in the designation of certain land areas as toxic-zone dumps.

Fifty-Year

The following is a list of possible projections which may occur over the next 50 years. They are organized under the four categories of: privatization, diversification, global, and information / individual.

Privatization

Waste management will be totally privatized. There will be minimum profit in mismanagement.

Diversification

Orientation of systems and bureaucracies and governments will be more diversified. Race will become minimized but socioeconomics will become the ultimate divisor.

Global

Environmental justice accountability will be managed internationally.

Information/Individual

Access to information will be so accessible that individuals will become more empowered and deference will no longer be given to small organizations.

Conclusion

Historically, the "Quality of Life" Issues of housing, education, and employment for African-Americans, Hispanics, Asian/Pacific Islander Americans, and American Indians (minorities) have been recognized only after they have initiated the impetus for that recognition. The occasion for this impetus has taken the forms of urban riots, farm worker strikes, civil rights marches and sit-ins. Each has come as a result of an inability to tolerate the unacceptable any longer.

The reaction of the Majority Society is to reluctantly move through three levels or stages of resistance. Initially, "The Issues" find limited audience with majority society fringe elements, i.e. left wing, religious groups or youth, all of whom serve as societal border guards. Then, once enough of these voices have joined the minority chorus, it becomes necessary to assign blame or responsibility to the appropriate guilty parties in order to absolve everyone else. And finally, processes and systems are developed/employed to "handle it." Thus, any failing of timely or sufficient change then becomes the failing of the system, not of the people managing the process.

This scenario applies to the Environmental Justice Movement. As a result of unabated environmental atrocities, the disenfranchised have taken their battle to the streets. Members of the majority society fringe elements are joining the crusade. No longer able to contain the swelling tide of environmental issues, blame has been placed at the doorstep of industry and EPA, with a general absolution assumed for the rest of society. The development of the Executive Order and the proposed environmental justice legislation are formal processes and systems designed to "take care of it."

The attainment of environmental justice cannot be achieved by becoming the latest "it" to be shuffled off into the bureaucratic maze. Environmental justice will only become a part of the fabric of this nation when the principles of environmental equity become a part of the heart of all of its people.

Appendix A

Examples of Environmental Injustices

Altgeld Gardens, South Side Chicago, Illinois

A 2,000-family housing project that was built on an abandoned toxic dump site; located nearby are a sludge plant, a steel mill, a paint factory, an incinerator, and an 80-foot-high landfill.

Geismar, Louisiana

Eighteen industrial plants within a 5-mile stretch.

Warren County, North Carolina (66% African-Americans)

PCB landfill of 32,000 cubic yards of contaminated soil was buried in spite of shallow (1 ft.) water table.

Triana, Alabama

African-American town of 1,000 residents contaminated by buried PCB and DDT that found its way into the water table.

Houston, Texas

Six out of eight of the city's garbage incinerators and all five of the city-owned municipal landfills are located in predominately African-American neighborhoods.

Emelle, Alabama (79 percent African-American) and Scotlandville, Louisiana (93 percent African-American)

Combined, these two municipalities take in annually 1/3 of this nation's 250 metric tons of commercial hazardous waste.

Farmworkers (World Resources Institute, 1984)

An estimated 313,000 farmworkers suffer from pesticide-related illnesses.

Utah and Arizona

The Navajo (American Indian) Reservation is the dump site for 2 million tons of uranium tailings.

Everglades, Florida; Fond du Lac, ??Minnesota; Puyallup Tribe, Washington; St. Regis Mohawks, New York

Agency for Toxic Substances and Disease Registry certified that mercury contamination from fish was responsible for elevated lead levels in blood of reservation women and children.

Kettleman City, California (95 percent Hispanic)

Home of the nation's 4th largest hazardous landfill.

Port Arthur, Texas (predominately African-American)

Location of the nation's largest hazardous waste disposal.

South Tucson, Arizona (predominately Hispanic)

Residents from 27 out of 30 homes on a street named "Calle Evelina" died from cancer attributed to trichloroethylene-contaminated water.

Richmond, California

Laotian families tend vegetable gardens on the grounds of an abandoned battery factory.

San Francisco, California

Seventy-four percent of Chinatown's housing was built before 1950 and as a result seniors and children suffer from lead poisoning.

Marshall Islands

Testing of nuclear weapons started in 1940 but residents were not evacuated until 1968. Today, food grown on these islands has up to 60 times the allowable levels of strontium and cesium.

Guam

At a U.S. Naval Base PCBs were found to be over a million times higher than permissible concentrations.

Appendix B

National and Regional Grassroots Environmental Justice Groups

Asian American Legal Defense Fund	New York, N.Y.
Commission for Racial Justice	New York, N.Y.
Mexican American Legal Defense and Educational Fund	Los Angeles, California
Southwest Network for Environmental and Economic Justice	Albuquerque, New Mexico
Farmworker Association of Central Florida	Apopka, Florida
Gulf Coast Tenants Organization	New Orleans, Louisiana
United Church of Christ	Enfield, North Carolina
Warren County Concerned Citizens	Warrenton, North Carolina
Native Americans for a Clean Environment (NACE)	Tahlequah, Oklahoma
PODER (People Organized in Defense of Earth and Its Resources)	Austin, Texas

Appendix C

GROUP OF TEN

1.	The Sierra Club Foundation	San Francisco, California
2.	Sierra Club Legal Defense Fund, Inc.	San Francisco, California
3.	National Audubon Society	New York, N.Y.
4.	National Wildlife Federation	Washington, D.C.
5.	Environmental Defense Fund, Inc.	New York, N.Y.
6.	Friends of the Earth	Washington, D.C.
7.	The Izaak Walton League of America, Inc.	Arlington, Virginia
8.	The Wilderness Society	Washington, D.C.
9.	National Parks and Conservation Association	Washington, D.C.
10.	Natural Resources Defense Council, Inc.	New York, N.Y.

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